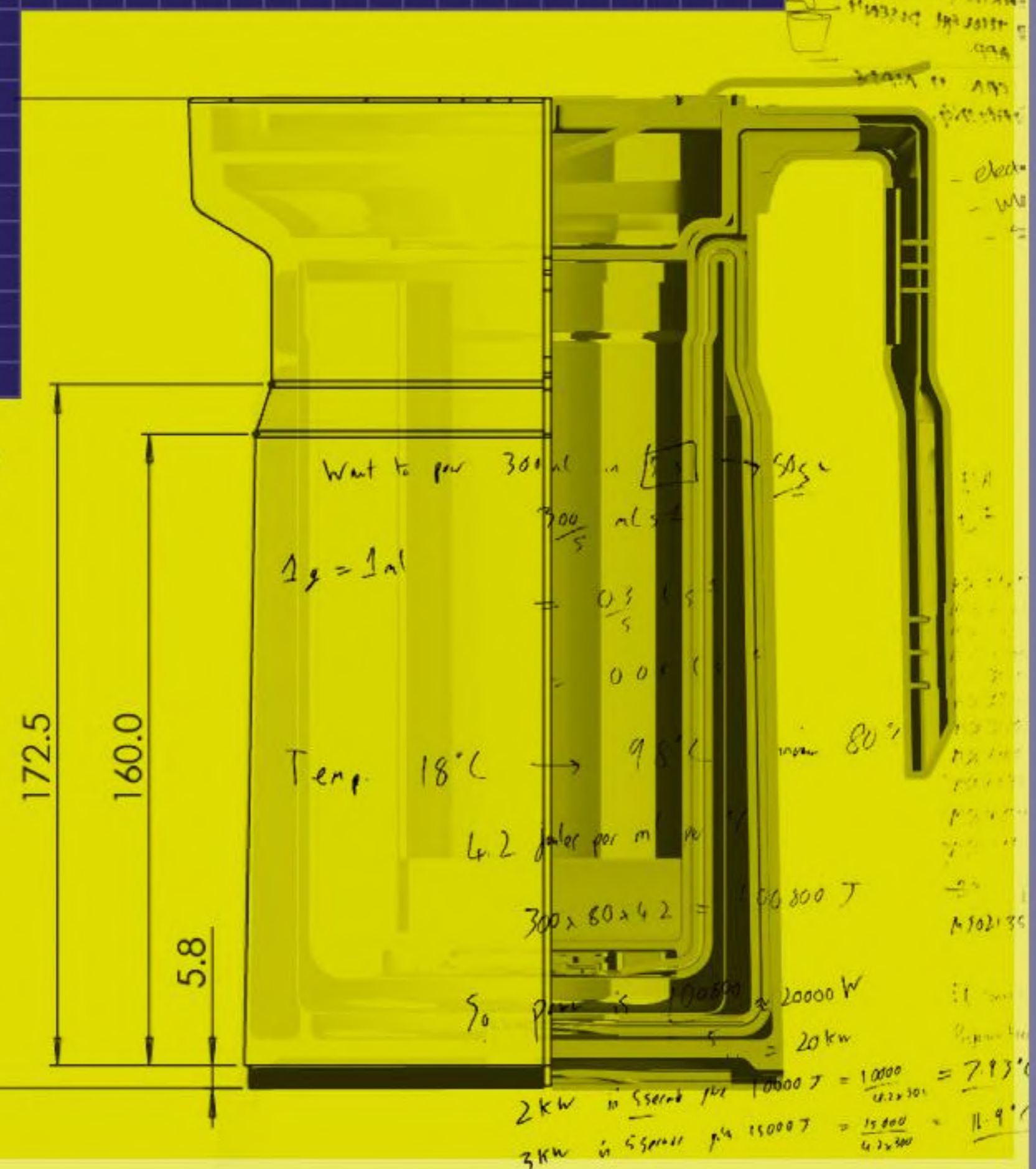
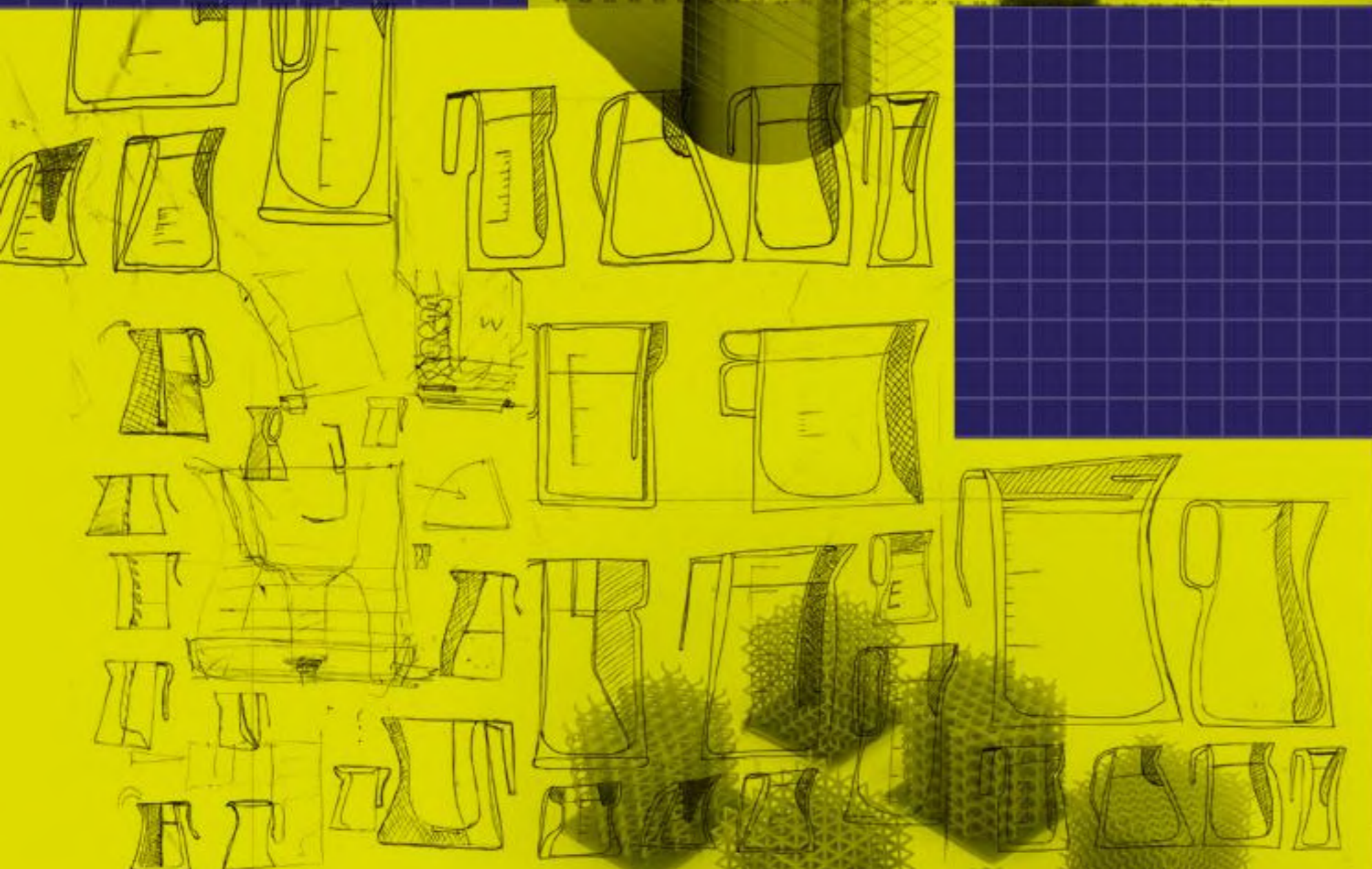
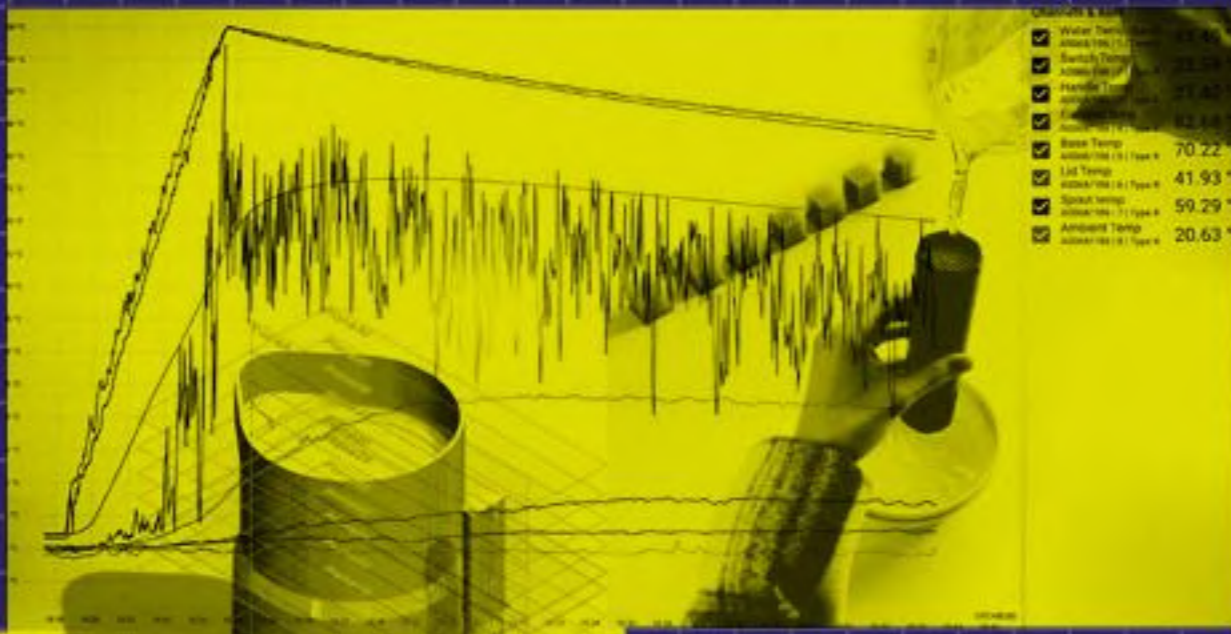
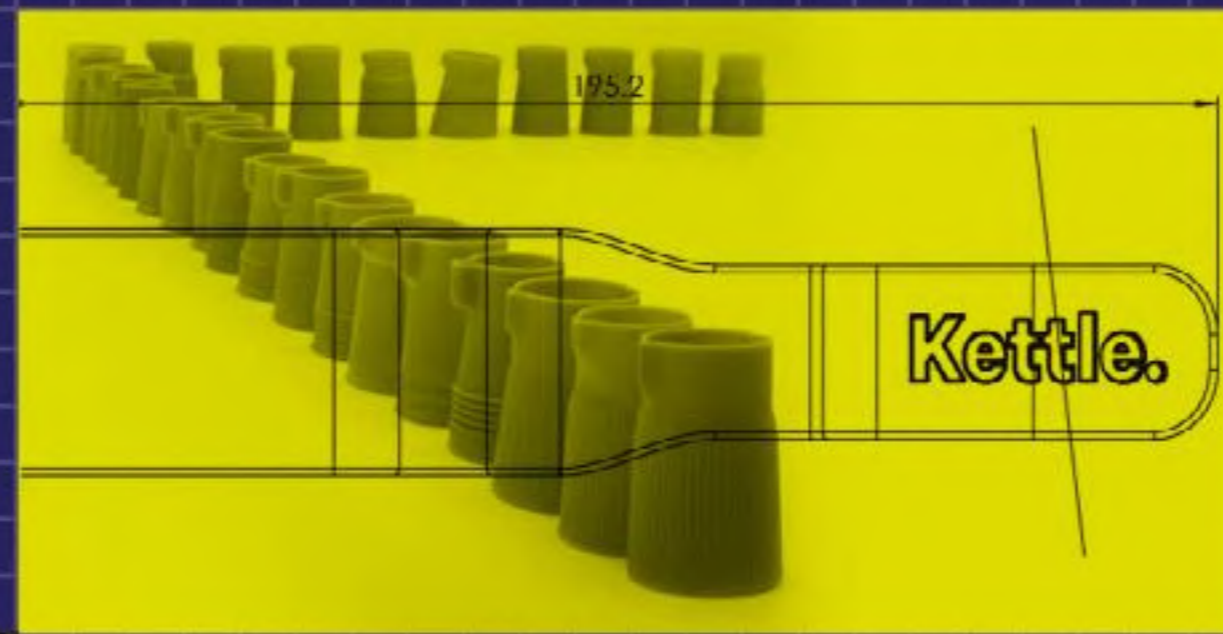
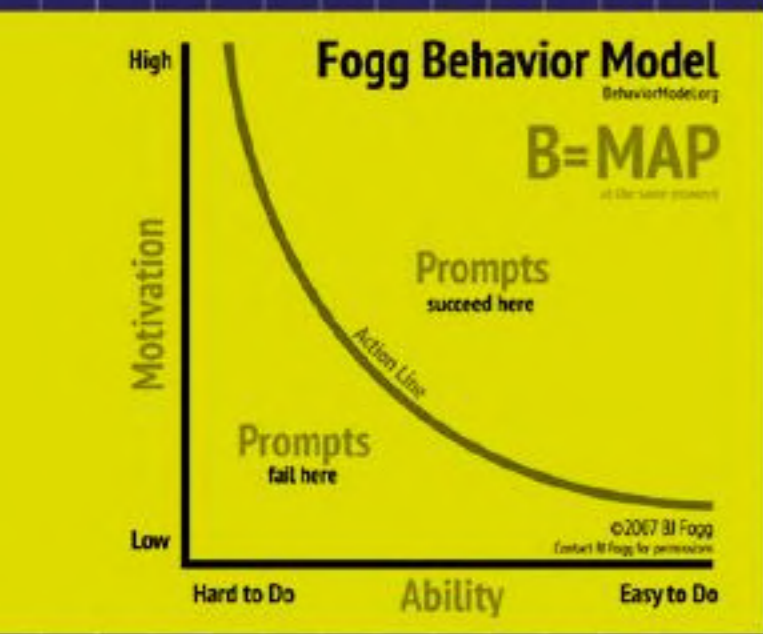


#MDXPD

2022+
PRODUCT DESIGN 2023
 Middlesex University Faculty of Science and Technology



#MDXPD WELCOME

“...bringing people and technology together (in meaningful ways) to create useful stuff and things.”

Welcome, everyone, to our 8th (almost) annual #MDXPD Magazine. Our 2022+23 magazine brings together news and student work from our 2021-22 and 2022-23 cohorts and spans that period with our news stories and features.

We continue “...bringing people and technology together (in meaningful ways) to create useful stuff and things” with a big focus on the sustainability and inclusiveness of those ways, stuff and things.

We've been through revalidation, reaccreditation and big changes within Middlesex University and across the university sector during this period. Our strong philosophical and structural foundation, developed over two decades and underpinned by active multi-stakeholder co-design during our previous validation and accreditation cycle ensured that, led by our fantastic Programme Leader, Dr Kate Herd, we flew through both for our BA(Hons) Product Design, in very positive processes, with high commendations from the panels and independent reviewers. Our focus on collaborative practice, studio 'environments', constructivist pedagogy and team teaching holds strong for another five years!

We work to approach design and engineering within our philosophy that leads with insight, understanding and empathy, and values collaborative creativity and human and ecology centred innovation. This encourages and nudges towards positive versions of change, in everything we do. And our students embrace our philosophy and approach, embodying it with energy, dignity and support for one another.

This year's magazine contains our usual mix of inspirational final year major Projects, but from two year groups, alongside staff and student stories and projects from across the year. This year our special features focus on what happens to our graduates after finishing the course. We've got a big **'One Year On'** feature, alongside summaries of our previous 6 Years On and 15 Years On features and an extended reflection from Robin Read, a 2008 graduate and now Associate Principal Robotics Research Engineer at Dyson. These features combine to build a rich set of stories, inspirations and reference materials for future and current students and help us to continue to explore within our ongoing project examining and evolving the definition of 'What Is a Product Designer?'.

Good luck to all our brilliant graduates over the last two years, and best wishes for the future.

Welcome to all our new students. Hello again to our returning students.

We hope you enjoy the magazine & best wishes to all readers.

Wyn Griffiths

Senior Lecturer BA/BEng Product Design/Engineering

INTRODUCTION TO #MDXPD

We live in a complex, fluid world, swirling with challenges and opportunities. Design offers a powerful medium through which we can strive to build a 'better' life. We are material creatures, in a material world. The 'things' that surround us, and drive us are increasingly interwoven with the virtual 'stuff' that has come to connect us. This is subject to constant change and evolution. Change is the only constant in life; in society and technology; in design and innovation. The puzzle is how to mediate that change for specific and holistic good. How to explore and navigate pathways towards creating new things that have a positive impact, that 'make the world a better place...'

A Product Designer can be an important part of this exploration. There are many, unresolved, ways to think about 'Product', 'Design' and a 'Product Designer/Engineer', but, regardless of any particular interpretation, we at 'MDXPD/E' think there are some key skills, experiences and attributes that a Product Designer/ Engineer needs. Build skills in Design Thinking, design and technological craft and professional practice. Build experiences through wide-spectrum exploration, focussed sectoral exercises & live industry collaborations. Nurture an attitude of imagination, empathy, collaboration, storytelling, curiosity, ingenuity, courage, perseverance and resilience. The watchwords of gumption, humour and grit will go a long way to helping you on your way as a Product Designer/Engineer!

READ ABOUT OUR COURSES ONLINE:

BA Product Design

www.mdx.ac.uk/courses/undergraduate/product-design

BEng/MEng Product Design Engineering:

www.mdx.ac.uk/courses/undergraduate/product-design-engineering

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#mdxpd



2022-23 Reflections

Dr Kate Herd, Programme Leader for the *BA Product Design & BEng/MEng Product Design Engineering* programmes reflects on the year



on campus. We updated our studio space to include more physical prototyping and photography capability, and to enable us to better showcase student work. The MDX Degree Show returned to campus, and our graduates exhibited their work here, in addition to New Designers and in the online Dezeen Student Showcase.

Being back in shared physical spaces on campus is a reminder of how human connection and interaction is at the heart of everything we do as product designers. The experiences of the last few years have shown us how we can achieve so much in shared digital spaces (and we continue to embrace these technologies and practices as we move forwards), but it's been lovely to see a studio and workshop space once again filled with design conversation, observation, connection and interaction.

Once again, I reflect on how lucky we are to be part of a subject that makes a difference. A subject that develops each student as an individual, and with a mindset and skill set to make things better. A subject that is so broad it allows us to tackle topics from sustainability through to medical innovation. A subject where our students and graduates make a genuine impact in the world.

It's a pleasure to be able to look back upon another successful period for our MDXPD programmes. 2021-22 brought us back to campus, taking a blended-learning approach as covid restrictions were phased out. New Designers returned to a physical exhibition at the Business Design Centre, and we saw the completion and showcase of an excellent range of graduate projects. 2022-23 brought us fully back

A huge thank you to everyone - staff, students, guest lecture speakers and other industry collaborators who have contributed to our ongoing successes this year. We look forward to another exciting year ahead.



Institution of Engineering Designers [IED] Accreditation

The BA Product Design programme was successful in its re-accreditation for **Registered Product Designer (RProdDes)** status



In May 2023, culminating in a two-day visit from an expert panel, the BA Product Design programme was successful in its application for re-accreditation for **Registered Product Designer (RProdDes)** status. A thorough examination of the programme documentation and facilities, examples of coursework and assessment, and meetings with staff, students and graduates, allowed us to share the exciting educational experiences that continue to take place here at Middlesex University. Our programme accreditation will now run for a further five years. This means that we continue to be fully supported by the Institution, and IED Student membership is free to full-time students for the duration of their studies. Successful students can then upgrade to Member upon graduation.

Our BA(Hons) Product Design has been continuously accredited by the IED since 2007, with us receiving automatic granting of Registered Product Designer (RProdDes) for graduates immediately upon the launch of this valued registration grade in 2017. This accreditation heritage testifies to the focus on rigor, high standards and professional relevance by our staff and students. Each accreditation visit is a helpful milestone in our reflective practice approach, which is embedded within the content of the course, and at programme level. In 2017, we completed an extensive co-design process, bringing together stakeholders from industry, schools and professional institutions with our students, graduates and staff to ensure that our course structure and content continued to be sector-leading, resonant

and relevant to the ever-evolving needs of society and our students. Through 2022, in preparation for the next accreditation visit in 2023, we tweaked, to ensure everything was fully up to date.

Professional accreditation is a mark of assurance that courses and programmes meet the standards set by their relevant profession. For IED accreditation, this ensures excellence in delivery and content in the field of product design, and affirms that the programme provides industry relevant skills and experiences. Their subject analysis covers five key areas of learning:

- 01** Design principles
- 02** Design analysis [design judgement & evaluation]
- 03** Creativity and innovation
- 04** Design practice [the 'doing' of design]
- 05** The designer and society [recognising the local, national and international context in which one practices].

Learn more by visiting www.ied.org.uk/who-are-we/



'LIVE' PROJECTS

Our **Product Design** and **Product Design Engineering** programmes always have 'live' projects interwoven into the curriculum: a snapshot of activity 2022-2023



To work with such an enthused group of design students over the term was exhilarating. One by one they took on difficult challenges related to my company's products and devised brilliant solutions - in many cases going far beyond the brief. Their creativity, ingenuity and brilliant solutions left me inspired week after week.

Industry connection and relevance is at the heart of our Product Design and Product Design Engineering programmes and 'live' experiences remain interwoven into the curriculum. These include our weekly guest lecture series led by academic Ahmed Patel, 'live' projects, industry masterclasses and tutorship by practicing designers. These offer a breadth of activity and interaction that supports our students in developing not only subject specific knowledge, but in building networks and connections, enabling reflection on personal practice, and in developing confidence in both themselves and their skill set.

Across 2022-23, we've been lucky to work with a breadth of industry including:

- + Design Psychologist, Professor Patrick Jordan
- + The Thrill Engineer, Professor Brendan Walker
- + The Institute of Mechanical Engineers (IMechE)

- + Space Plague: SMASHfestUK
- + Solarcan

During 2022-23, second year PDE students took part in an exciting 'live' brief working with the innovative solagraphy company solarcan. Born from a love of photography, art & astronomy Solarcan is a unique camera designed to produce extreme time exposures that capture the Sun's path across the sky.

Sam Cornwell, founder of the company, joined us for a fascinating guest lecture that shared the development of the original solarcan - from idea, to kickstarter, to final production. After such an inspiring talk, we asked Sam to join us for a 'live' project, and we worked with him to devise a series of project briefs looking at the development of the solarcan range - from new user experience through to the resolution of a range of technical challenges.

LIVE PROJECTS, CLIENTS, COLLABORATIONS & COMPETITIONS at MDX Product Design/Engineering 2021-23

Institution of
MECHANICAL
ENGINEERS

SMASHfestUK

Middlesex
University
London

solarcan



Led by visiting lecturer, Peter Wong, the design process took students through group and individual activities exploring the current products, scientific principles, market and user experience. Armed with a collection of solarcan and pucks, they mounted these across a variety of locations around campus, analysing both the physicality of product range and the user experience. For the project briefing and regular feedback sessions, Sam joined us in the product design studio via Zoom from his Edinburgh base.

Over a seven week period, each student developed a product in response to a chosen brief, with final outcomes designed and specified for manufacturing processes appropriate to the company. Sam was inspired by the work ethic and outcomes, "To work with such an enthused group of design students over the term was exhilarating. One by one

they took on difficult challenges related to my company's products and devised brilliant solutions - in many cases going far beyond the brief. Their creativity, ingenuity and brilliant solutions left me inspired week after week."

In the final week of the project, Sam joined us in London at our Hendon campus for students to present their designs. The breadth of final projects included: a silicone window mount for a solarpuck; flexible packaging design to support STEM activity; the concept for an easy to build analemma; and a device to solve issues of depressurisation when shipping the solarcan by air. "Three of the student's projects caught my eye and are in development with Solarcan. The "Puck It" designed by Irene Torres, an ingenious window attachment accessory for the PUCK is being worked on now. Solarcan has invested in a CNC cutter to develop a reliable mould to facilitate this, and we

hope to release this as a product by Christmas."

Exchange student, Irene Torres Monserrat concludes, "Working with Sam was very interesting, and I really enjoyed it. Having a client set a very professional tone. We learned a lot from this experience, including learning how to communicate professionally in a work environment." Many thanks to Sam for his enthusiasm and support throughout the project.

Project commendations:

For their work on the solarcan puck **window mount:**

- + Irene Torres Monserrat
- + Imogen Sykes
- + Maria Fernandez Martinez

For the development of an **analemma system:**

- + Diego Fernandez Muñoz

For their explorations around **depressurisation challenges:**

- + Leyla Vedadipour
- + Sebastian Stefan Szafranski Olejniczak

#mdxpd | 60 seconds

Staff on the Middlesex University Product Design/Engineering Programmes are active professional practitioners and researchers. Here is an interview with **Peter Wong**, Visiting Tutor at *Middlesex University London* and partner in *Pemberton Dear Product Design Consultancy*



We need to find ways of reducing cost and time spent on the product development process - failure to do so will lead to only larger organisations being able to engage in design projects and stifle innovation. Fortunately there many tools and processes have become easier, faster and cheaper to use such as 3D printing.

You are?
Peter Wong

Your background?
I have just started my new role as Lecturer in Product Design and Engineering Product Design at London South Bank University. Prior to that I was a visiting Lecturer at Middlesex University while also a partner in Pemberton Dear Product Design Consultancy. I have a 20 year background working

for various in-house teams in Product Design and Development after studying at Middlesex University.

Why Product Design?
I love being able to create new things - to take in idea that only exists in your imagination and making it real. The excitement of putting together components that have only previously existed in your imagination and the relief

Follow Peter on Instagram @peedubbleyou and LinkedIn [linkedin.com/in/peter-wong-design/](https://www.linkedin.com/in/peter-wong-design/)

when they fit and they work is so rewarding.

What's a standard day like for you? One of the reasons why I love being a product designer is that there isn't really a standard day. Each project is different which means that I am never bored. Unless I am doing documentation!

What do you consider a good day? A good day is when I have been able to finish all the tasks that I had planned for that day, which is not always possible. A great day is when I have solved a design problem - this usually happens when I am doing something else like driving home or doing the washing up!

What are your favourite tools and processes? 3D CAD has always been a satisfying task - the challenge of not only how to solve a design problem but also figuring out to create the 3D model. I also love making things in the workshop - something that I don't get to do as much as I'd like to!

What do you wish you were great at? Sketching - especially as I have to teach it to the students at my new job, so it's 100 ellipses per day until October! Also being able to say 'that's good enough'. The perfectionist in

me always wants to tinker but a deadline is a deadline.

How has Product Design evolved since you have been in industry? Product Design has evolved to encompass digital products and there are perhaps more opportunities in the digital space than the physical. However it is testament to the skills that a Product Designer that they are able to work with both physical and digital media.

What is Product Design/a Product Designer in the 21st century? A generalist, a 'Jack of all trades' - someone who knows a little of everything but most importantly, knows how to communicate with a specialist. For example, I am not an expert in designing electronics, but when I speak to an electronics engineer we can understand each other.

What's your advice for Product Design students? Turn up and impress - you never know who is watching. This is how I got my first internship - by being in the workshop all the time and getting spotted by John Pemberton, a visiting lecturer. 15 years later I became a partner in his consultancy.

What are the big looming challenges for designers... for society? The cost of developing a physical

product is, by orders of magnitude, greater than that of other media. Many of my clients have decided not to proceed with a project due to it being too expensive for them to develop. We need to find ways of reducing cost and time spent on the product development process - failure to do so will lead to only larger organisations being able to engage in design projects and stifle innovation. Fortunately there many tools and processes have become easier, faster and cheaper to use such as 3D printing.

What are the first 4 names on your fantasy exhibition Private View list?

- + Dieter Rams
- + Jony Ive
- + Naoto Fukasawa
- + Ross Lovegrove

FIND OUT MORE ABOUT PEMBERTON DEAR:

pembertondear.com

#MDXPD Graduate

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AURA

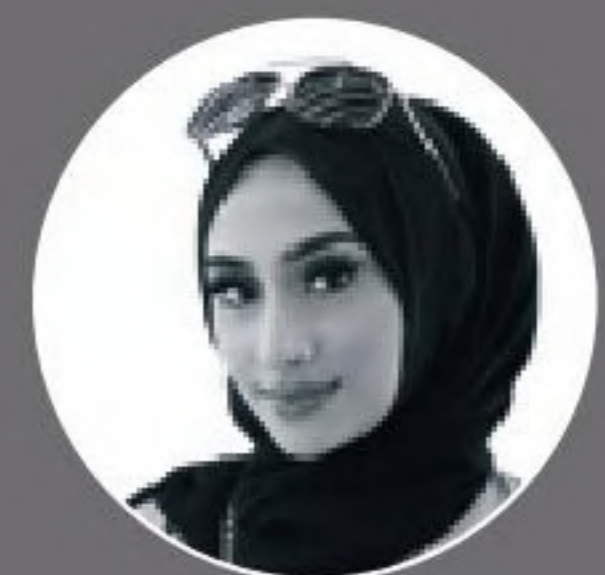
Illuminate, Capture & Share Your Personal Experience of Special Occasions.

Customisable, visual experiences that capture unique moments using photography have become an important component of celebratory occasions. People build the perception of their events and personalities by sharing on social media.

Aura is a product/service designed to enhance the guest experience by providing an **interactive**, visually captivating activity and memento. Participants create **self-portraits** enhanced with digital overlays using a **light painting tool** and the Aura system.

The wand features **programmable LEDs** that produce mesmerising patterns through controlled sequences of illumination. By utilising **long exposure photography**, it allows the user to

create dynamic light paintings, where users become part of the photograph, resulting in memorable images.



FAAIZA ALI
PRODUCT DESIGN BA

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SETz

From Established DJs. For Aspiring DJs.

SETz is a product that engages with the aspiring DeeJaying community for the people that aim to **learn DJ styles** and how to DeeJay.

However this targets a more general group of people that want to **share the experience**, as the device also allows the user to share the experience they captured in whatever environment the DJ was playing at.

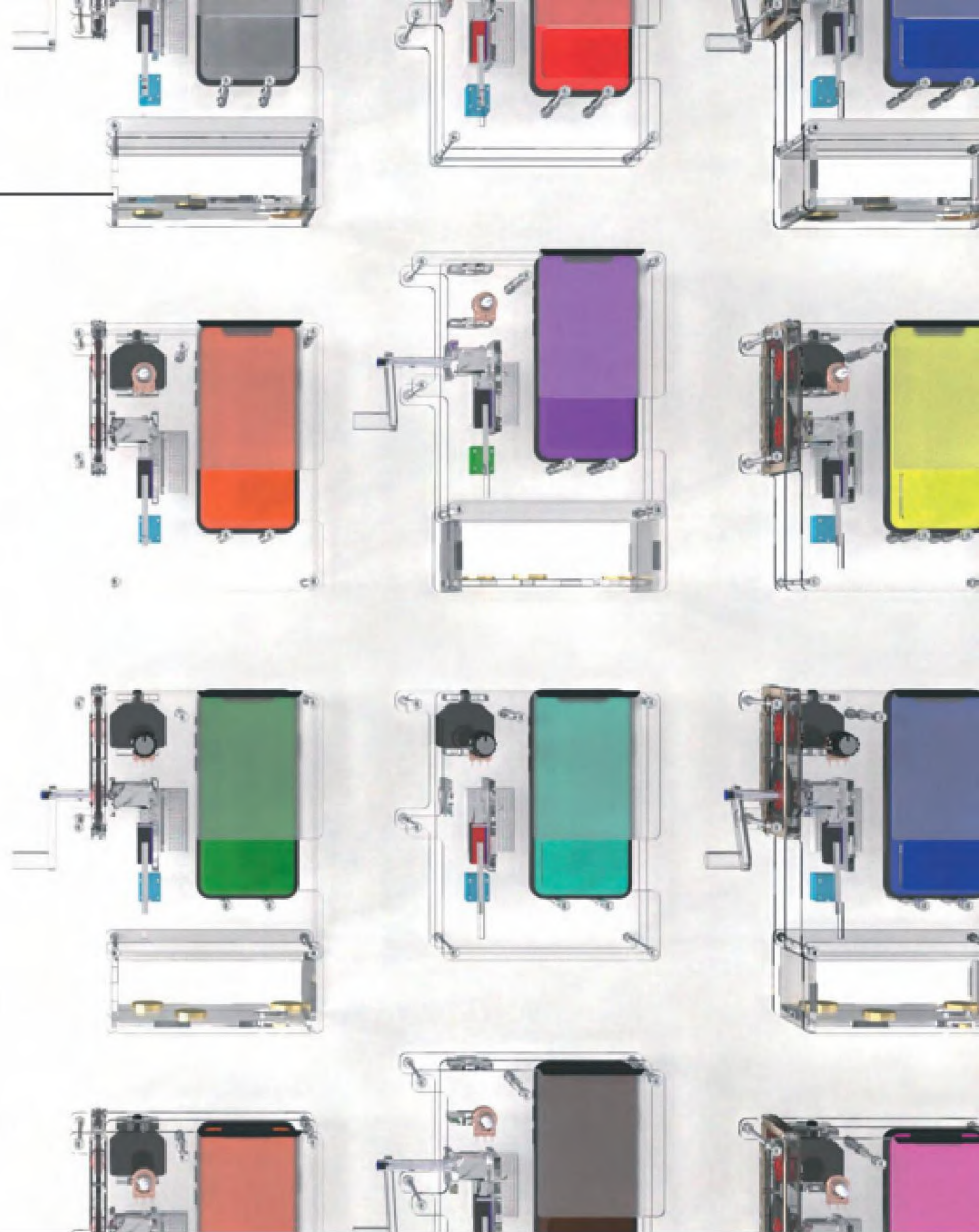
The innovation here lies in the use of existing technology for **a new purpose**. The technology being used here is a combination of sound recognition technology and dynamic wave analysis that is then compiled in a website/application after its been recorded. This can be used to then study and learn how to DJ the way the pre-recorded DJ does.



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T.U.X

How-to-Kit for Design Teams to Physically Test UX Interactions

A non-commercial tool to help UX designers learn through **physical exploration interactions** how to adapt digital code to the users needs. In this use case, the users are social media addicts who want an app feature that aids them in controlling this habit.

The user regulates themselves through either physical constraints or financial ones. You stop once you are too tired or reach the point where you value money more than social media.

After the designer learns through these interactions it is time to adapt them into code making it a viable solution or option for all social media users in this app.

Since the product is made to be **customisable** and **interchangeable**, the designer can swap components,

remove parts or even add parts. The kit is for the designers to use according to their needs.

You can use it to explore how Spotify users interact with its app or to control how much time users spent using Netflix. The main goal is to assemble your own prototype, explore through physical interactions and convert what you learn back into the programs code.



TIAGO ROSAS
PRODUCT DESIGN BA

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MUNDUM

Connecting Cultures

Mundum is a visionary project that aims to create **temporary structures** to house **immersive experiences** on the importance of sacred groves. Through transparent holographic mesh and augmented reality projections, Mundum seeks to **empower local communities, raise awareness about biodiversity, and promote sustainable ecotourism**. The project is designed to be adaptable to different locations and aims to minimise its impact on the environment through the use of sustainable materials.

Mundum seeks to promote sustainable ecotourism, giving visitors a chance to experience the augmented beauty and magic of these sacred groves whilst respecting the land and the ecosystem. It is designed to be a temporary and non-invasive structure made of bamboo poles joined with

sustainable polymer connectors, that can be adapted to the different thicknesses of the poles. Moreover, one of the unique features of this product is its ability to adapt to different locations and landscapes. Adapting its size to the characteristics of the route in each scenario without modifying or altering the landscape in any way.



JAVIER ORTEGA
 PRODUCT DESIGN BA

#mdxpd Alumni Feature

Real-world skills remains at the heart of our approach and our connections to industry are a critical part of the programmes. MDXPD encourages students to undertake a placement year. MDXPD Alumni, **Harry Miller-Adams** shares thoughts on his university experience, placement year, and offers advice for future students



Hi, I'm **Harry Miller-Adams**, a recent graduate in BA Product Design. I've always been fascinated by problem-solving, product functionality, and manufacturing processes. When I discovered that product design encompassed all of these aspects, I knew it was the perfect course for me. I chose to study at Middlesex University because of the passionate staff and students, and the exceptional facilities, including the workshop and modern design studio.

During my two-years at Middlesex University, I gained extensive knowledge and skills that have equipped me for

success. I confidently acquired a thorough understanding of the design process through a range of intriguing projects, which allowed me to master approaching and tackling a project with ease. Moreover, I learned all the necessary industry-related software, design techniques, prototyping methods, and sketching. Studio practice enabled me to apply my skills, receive constructive feedback, and develop them under the expert guidance of our lecturers and peers.

PLACEMENT YEAR

I undertook a placement on completion of the second year

at Middlesex University. During my placement year, I had the opportunity to intern at two renowned companies, **The Forge** and **LAYER**. The Forge specialises in post-production, motion control, video editing, and grading, while LAYER is an industry-leading design studio that works across strategy, industrial design, engineering, branding, digital design, and spatial design. Both of these placement experiences were truly invaluable, as they allowed me to hone my existing skills while acquiring new ones.

At The Forge, I collaborated with experts in the photographic and CGI fields to create high-quality

Follow Harry Miller-Adams on Instagram @designovated and Connect with Harry on LinkedIn [linkedin.com/in/harry-miller-adams/](https://www.linkedin.com/in/harry-miller-adams/)



product advertising campaigns for several renowned companies. I utilised various software such as C4D and Photoshop, as well as photography and cinema-photography techniques, including cinema-photography robot training. My time at The Forge enabled me to gain a deeper understanding of rendering skills, and witnessing the creation of industry-leading shots in real-life situations furthered my knowledge of the techniques used and their rationale. These skills can be transferred to the three-dimensional space, enhancing my rendering abilities. As The Forge was my first industry experience, I also learned a

great deal about how a business operates, what constitutes a great company, and what is expected of employees and employers.

Throughout my internship at LAYER Design, I had the honour of collaborating with numerous exceptional design teams to tackle a variety of design briefs for notable clients. These opportunities allowed me to significantly enhance my design process, acquire new techniques, and refine my skill set. From conducting research and ideation to sketching, SolidWorks, KeyShot rendering, presentations, and client meetings, I was involved in every stage of the process.

As a consultancy, LAYER Design provided me with an array of exciting and distinctive projects to work on, making me feel incredibly fortunate to have been a part of such an exceptional team. My internships provided me with a solid foundation to excel in my career, and I am confident that the skills and knowledge I gained will set me apart in the industry.

PLACEMENT ADVICE

I highly recommend students to pursue an internship in industry. While it may seem daunting to work in a real company, it is completely normal to feel apprehensive.

I had similar concerns about my abilities and meeting the expectations of my supervisors. However, the skills, insights and experience gained from an internship are truly invaluable and will undoubtedly help you develop and enhance your abilities. The confidence and quality of work that you will acquire will be a game-changer.

When searching for a placement or internship, it is advisable to apply as early as possible and to apply to multiple companies. The competition in the industry is intense, making it challenging to secure a position. Unfortunately, it is unlikely that you will land a job with your ideal company in the first instance. However, it is not impossible, as there are many factors to consider. Your portfolio is a crucial element in the application process, as it is what potential employers use to assess your suitability for a job. Since there will likely be many other applicants vying for the same position, it's essential to make your portfolio stand out and capture their attention. Furthermore, your CV should be relevant and up-to-date (no one wants to know that you passed your one hundred metre swimming test when you were eight), and your cover letter, well-crafted and tailored to align with a company's values and objectives. By doing so, you will increase your chances of being selected for the job.

FINAL YEAR & FMP

As a designer I feel it is my duty to challenge the pre-conceived normality - a mantra that Middlesex University has certainly reinforced. During my final year at university, I decided to take on the challenge of redesigning the humble kettle. '**Kettle.**' A revolutionary domestic



appliance that harnesses the power of heat exchange technology to reduce water, energy, and economic waste. I was extremely concerned to discover that three-quarters of British households overfill their kettles, resulting in a staggering daily waste of 70 million litres of water and an annual loss of £68 million while making tea. My final major project (FMP), Kettle. is a next-generation appliance that delivers instant hot water through the use of cutting-edge high-surface, lattice structural heat exchanges, vacuum flask housing, micro-controller technologies and modularity capabilities. With its optimised and efficient design, Kettle. not only offers pour-to-boil functionality but also delivers financial, environmental, and personal benefits that set it apart from its counterparts.

FINAL REFLECTIONS

My time at Middlesex University presented me with a variety of challenges and exciting opportunities, ultimately proving to be integral for my personal and professional

growth. The education and practical skills I obtained have equipped me with the necessary tools to thrive in the industry as a confident and skilled designer. I will forever remain grateful to those who have supported me throughout my journey.

NEXT STEPS

As a Product Designer, I have a multitude of exciting options for my next career move. One option is to secure a product design role, either within a design consultancy or an in-house company, where I can leverage my industry experience from my placement year. I am also highly interested in freelancing and pursuing an entrepreneurial path, where I can take charge of my own career and continuously enhance my skill set.

My goal is to continue pushing myself as a designer, further developing my skillset and ultimately becoming an accomplished and sought-after professional. I look forward to the future...

#mdxpd | Alumni Reflections

From interview to graduation. MDXPD Alumni, **Faiza Ali**, reflects and shares her experience of the *BA Product Design* programme at Middlesex University London



I never intended to go to university, but when I made the decision to pursue higher education, Middlesex University was my fifth option. Doubts about university were lingering, as I had been told that courses would be over-crowded with hundreds of students, lecturers wouldn't remember me, and there would be little to no one-on-one learning, leaving me to teach myself most of the course content.

Having attended interviews at five universities, with Middlesex being the last, I was immediately drawn to its unique teaching style. Instead of a conventional interrogation focused on my knowledge gaps, the interview involved a collaborative activity with other applicants, allowing me to learn and engage actively. I fell in love with this innovative

approach! Additionally, exploring the wide range of free facilities on campus and discovering the option for a placement year further solidified my decision to choose Middlesex University.

Throughout my time at Middlesex, I experienced a thriving community filled with diversity, and I never felt out of place. In fact, I learned to be more open-minded, and my class felt like a close-knit family. We became so connected that we knew each other's projects inside out.

One remarkable aspect I noticed was the dedication of the lecturers. They went beyond their roles as educators and embraced the responsibility of parental figures throughout my university journey. It's uncommon for students to forge such deep

connections with their lecturers, and I consider myself incredibly fortunate to have experienced this unique and exceptional university environment.

Coming from an artsy background, I had never imagined that I would engage in activities like wiring Arduino boards, designing non-invasive clinical products, collaborating on live projects, and working closely with design engineers. Yet, here I am, four years later, proudly holding a 1st class degree in Product Design with no regrets!

CONNECT with Faiza Ali on LinkedIn:

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#mdxpd | 60 seconds

MDXPD has been active in a variety of **academic exchange schemes** for students and staff. The benefits of exchange are huge to all involved. Sharing knowledge, experience, perspectives and cultures enriches the educational and research experience. We have a long-standing exchange arrangement with the *Technical University of Valencia, Spain*. Through this exchange, we regularly take 5-8 students into our Year 2, BA Product Design programme. **Irene Torres Monserrat**, 2022-23 exchange student, shares her experience.



...there was a very practical focus at Middlesex...As a Product Design student I was able to use the university's workshop and develop my projects there. The workshop was great and the staff were really nice and welcoming. They were always there to help you and in the workshop you got to develop very good prototypes for your project. At Middlesex they really valued working prototypes which is something very important in product design.

Tell us about yourself

Hi! I'm Irene Torres, a Spanish student from Valencia that decided to take an exchange year in London. I was studying Product Design Engineering in the Universitat Politècnica de València and in my fourth year I decided that it was time for a change and took an exchange year.

Why did you choose to participate in the exchange?

I wanted to do something different and get out of my comfort zone. I had always wanted to live in another place. I wanted to experience another culture and meet new people so when my university told me there was an exchange program

available I decided to apply for it. I decided London was a great place to go as it is a gigantic city and my English level would allow me to be fully integrated in the experience. I attended Middlesex University with some other Spanish classmates that also applied for the Erasmus program. It was a great experience where I got to work on lots of exciting projects.

How has the education at Middlesex differed from your home university?

It was interesting to see that the teachers at Middlesex had a lot of experience in their field of teaching. Some worked part time as university

Images (Left-Right): Irene Torres Monserrat Portrait;
Final Product Presentation to Solarcan (see pp. 05-06)

teachers and designers and some had previously worked in the design field for a long time. One thing that stood out was the size of the classes. Back in Valencia, classes were much bigger with an average of 60 students per class. At Middlesex, classes were much smaller and student centered. It was easier to talk to the teacher and get feedback. There was also a friendlier relationship between teachers and students as we got to really know each other. There were also some differences in the projects that we worked on as there was a very practical focus at Middlesex. I think that my home university was more exam centered, and while we did practical projects too we lacked resources. That was something really useful and great about Middlesex. As a Product Design student I was able to use the university's workshop and develop my projects there. The workshop was great and the staff were really nice and welcoming. They were always there to help you and in the workshop you got to develop very good prototypes for your project. At Middlesex they really valued working prototypes which is something very important in product design.

What has been the most interesting/valuable experience?

I would say that working alongside Middlesex students and teachers was a very interesting and valuable

experience. I got to meet lots of interesting people with different life stories. You got to see different points of view when working with these students. I also attended the New Designers exhibition in London where MDXPD graduates were showcasing their work. This was an eye-opening experience as I got to see lots of projects that I didn't even think students would be pursuing! This made me realize how important it is to get out of your comfort zone, explore and see what other people are doing. I got to see projects that were really different from the ones I saw back home, which was really amazing.

My Spanish friends and I got to understand a different culture and had a great time in the accommodation provided by Middlesex. We were very close to the university and lots of students were staying there. This was also a very nurturing experience as we got to meet lots of different students from all around the world.

What's next for you?

Right now I just graduated as a Product Designer and I'm currently attending some short design courses to expand my knowledge in this field, and am working on my portfolio. I'm trying to learn new languages and my aim is to study my Master's abroad! I had such a great time in my exchange year and I learned so much that I decided I wanted to keep

exploring and learning from new and interesting people.

Would you recommend an academic exchange to anyone considering it?

Yes, of course! I would encourage everyone to break their cycle and take an academic exchange year. You might not know it yet but you will learn so much during this year. Being in another country will teach you so many things and it will be a great experience. You will get to experience another culture and get to meet very interesting people.

Academically you will have a much more global perspective on how your field is studied worldwide, and will be able to take opportunities that might not be available in your home country. You will also experience a lot of personal growth and become a much more independent person.

Our 2022-23 exchange students are:

- + Antoni Palazej
- + Cesar Sotoca Prades
- + Diego Fernandez Muñoz
- + Guillermo Páram Valdivielso
- + Irene Torres Monserrat
- + Maria Fernandez Martinez
- + Sebastian Szafranski Olejniczak

REDLOOP

Middlesex University Design & Innovation Centre / Faculty of Science and Technology



How we work:

redLoop is driven by collaborative innovation. We work with research teams and form project groups both within the university and beyond, to develop and deliver projects that increase the potential and impact of the University's work for internal and external partners, networks and clients. Research is central to our creative process, both research-led innovation and innovation-led research.

- + We provide opportunities for students to gain experience in a unique working environment, with leading edge design and innovation practice, delivered with the insight of educators.
- + We develop professional competence and employability potential through projects, placements and internships.

As a team of designers, we make significant contributions to high profile research within the university through the formulation, creation and visualisation of innovative concepts, working with industrial

partners in leading edge manufacturing. Our team of junior designers work with us for the whole year, and are critical in supporting this design activity.

2021-22 saw our return to campus (after working remotely during 2020-21), and a change of base, from our previous home in Colindale to new office space on the university campus in Hendon.

Our work over the last two years focuses primarily around biomedical research, working alongside biomedical scientists and engineers within Middlesex University, UCL and Cambridge University. As a team of product designers we are well placed to provide the insights into human behaviour, product development and manufacturing that can help bring innovation out of the lab and into clinicians hands. Our visualisation skills help generate the concepts and supporting visual assets to contribute to persuasive and clear grant applications.

We were part of the Middlesex Led team that was awarded emergency funding by UK Research and Innovation to develop a low-cost, real-time, non-invasive lung imaging system for COVID-19 patients, both in intensive care and for 'long covid' support. We rapidly developed a new approach to patient wearable electrode arrays using printed electronics, which is now in manufacture and with a patent filed.

We are continuing to develop this system, optimizing the electronics, the user-interfaces and the approach to manufacturing the patient wearable. As an ongoing co-creation effort with clinicians, we continue to ensure that we meet clinical use cases as they emerge.

Other projects have included: **Pneumacrit:** This £1.8M EPSRC grant builds upon previous work developing real-time lung imaging technology for

Find out more about **redLoop** at <http://redloopdesign.com>

neonates. The wider project focuses on new approaches to the underlying technology, using leading edge printed and organic electronics, along with new approaches to wireless power and data transfer in an ICU setting. The redLoop team not only contribute to the manufacturing and product development, but are also able (along with the intern team) offer guidance and insights into in-context use.

We have worked on innovative ways to encapsulate the optimized electronics meeting ingress protection and manufacturing requirements, and the clinical use case. This new approach will enable a wireless approach to be adopted, humanizing the technology and enabling more naturalistic forms of clinical care to be undertaken.

We have developed graphical devices applied to the patient wearable to ensure that clinicians are able to easily select, apply and maintain the patient wearable. These devices also provide a positive parent affective response to the technology leading to more ready acceptance of its use. They are a powerful addition and are in the process of design registration.

Oral cancer detection device:

We are part of a team working across Middlesex University and University College London developing a device to enable dentists to perform early diagnosis of oral cancer. The work is currently under Non-Disclosure Agreement a patent has been filed for the electrode array, device embodiment and use. We developed the device

enclosure, interface and electrode array.

Pedagogy of Space: We have previously worked on an ESM (Emotion Sampling Method) app that has been used in 5 schools to establish the key architectural and environmental factors that affect intrinsic and extrinsic motivation to learn. We are now in the process of developing a physical computing system that can collect objective measurable data about humidity, temperature, light and air quality. We are gaining further insight into learning spaces through sound/noise analysis.

Deep Brain Stimulation for Mitigation of Parkinson's

Symptoms: All currently available systems use a highly invasive implantable in the patients brain. We have been working as part of a multi-university team to develop an ono-invasive, wearable device that can be used in community settings.

We act as a 'transition space' between the University and the outside world, and as such we can provide students with amazing opportunities to work on real design projects with commercial clients. Each student on placement works with us as a Junior Designer and plays a key role in bringing our projects to fruition, overseen by the redLoop team.

Dhruv Mohabir, a 2021-22 intern, reflects on his experience and redLoop, "A small place with big opportunities. redLoop has allowed me to work on life changing design from designing better buildings through to innovation in healthcare. As an intern I've been able to contribute

across all of aspects of the design process, from initial concept through to design for manufacture and attending client meetings. It has been incredible to work on such a breadth of projects, and has been a great team to be a part of."

The **2021-22** placement team:

Dhruv Mohabir
Faaiza Ali
Javier Ortega De Vincente
Sahar Ali
Santiago Andura Arias

The **2022-23** placement team:

Charles Mortimer
Irum Farooq
James Boohan-Makhlouf
Kye Stopford
Louis Aka
Mark Bustamante
Raed Qutqut

If you're interested in a placement with redLoop please drop us an email.
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SHUTTERMATE

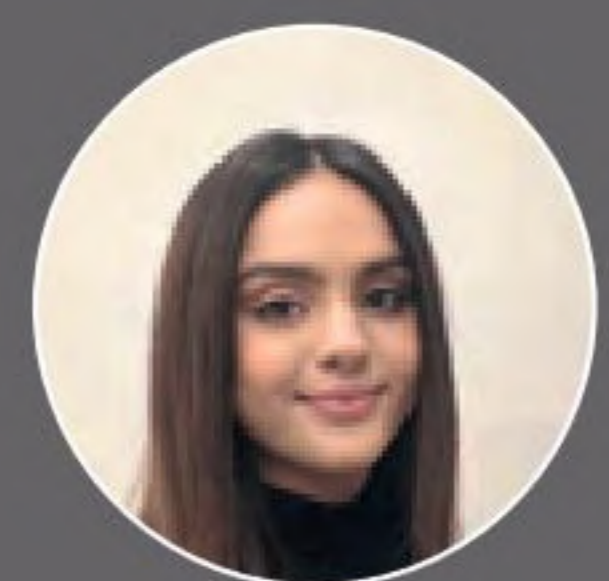
Smart Temperature-Responsive System for Climate Control

In today's era of increasing **climate change** impacts, the demand for sustainable and practical solutions to combat extreme weather conditions is more pressing than ever. ShutterMate offers an innovative and **eco-friendly** approach to addressing the challenges posed by heatwaves and unpredictable weather patterns.

At the heart of ShutterMate lies its utilization of **temperature sensitive smart materials**, enabling it to automatically respond to changes in temperature and effectively **regulate** the internal room temperatures of homes and office environments. By employing this cutting-edge technology, ShutterMate acts as a reliable shield against over-heating, ensuring comfort and energy efficiency.

The system's **actuation mechanism** relies on advanced nitinol springs,

which contract or extend in response to temperature fluctuations. These springs are integrated with a rotational actuator, enabling precise control over the angles and positions of the shutter blinds. The result is an **intelligent and adaptable system** that seamlessly adjusts to changing environmental conditions, providing optimal climate control and reducing reliance on traditional energy-consuming cooling methods.



SAHAR ALI
PRODUCT DESIGN ENGINEERING BEng

#MDXPD Graduate

HOWARD SYMEONIDES
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@howards_hardwood

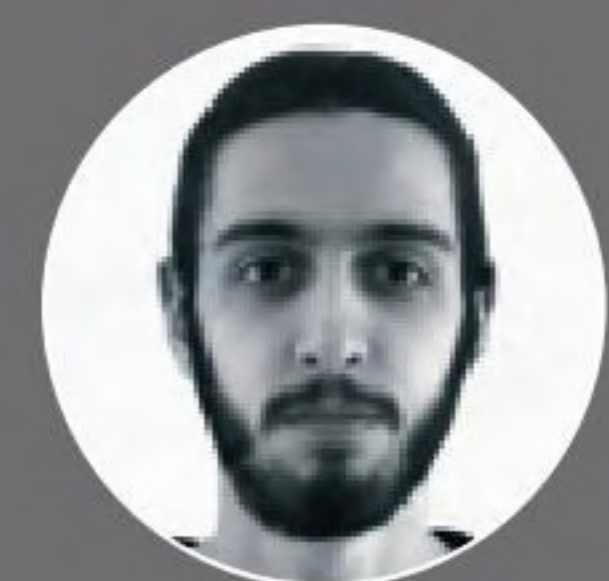
I

More With Less - Sustainable Furniture System Designed to Last

With the current state of the world we have seen prices reach an all time high in almost all sectors. Consequently, now more than ever, we see people shopping around for the best deals and cutting out many of the non essentials just to make ends meet. Although perhaps not as evident, the issue of wastage has grown. In these difficult times it is the manufacturers who benefit from the low cost, low quality goods as these are never designed to last.

The I system works to combat furniture waste with a robust 'frame' that is often lacking in budget furniture. The visual design language that lends itself to the construction industry, aids consumers in understanding the design philosophy. This project acts both as conversation piece and to encourage consumers, manufacturers and designers alike to

understand the impact their choices have on the environment.



HOWARD SYMEONIDES
PRODUCT DESIGN BA

Kettle.

Pour-to-Boil Kettle Reducing Water, Energy & Economic Waste Through Lattice Structural Heat Exchange Technology.

Kettle. is a pour-to-boil domestic appliance reducing water, energy and economic waste through heat exchange technology.

'Three-quarters of British households overfill their kettles, wasting 70 million litres of water daily and £68 million annually whilst preparing tea.'

Kettle. is an innovative pour-to-boil appliance providing **instant hot water** through the use of sophisticated **high-surface, lattice structural heat exchanges**, integrated vacuum flask housing, microcontroller technologies and modularity capabilities. The Kettle's optimisation and efficiency provide not only pour-to-boil functionality but financial, environmental and personal benefits.



HARRY MILLER-ADAMS
PRODUCT DESIGN BA

ONE YEAR ON... **PP. 24-44 ONE YEAR ON SPECIAL FEATURE**

From graduation and beyond. In this special feature, MDXPD graduates from the last 3 cohorts, reflect on their pathways after graduation, reflecting upon their experiences and share their advice.



What happens when you complete your degree? This is a big milestone that can feel overwhelming. What's next? What 'career' will you go into? Have you got a job yet? What job? How do you go about finding the path that best suits you? How do you navigate the uncertainties of that next step? There's no one answer, but our graduates have some great stories and advices to help you find your own way.

A perspective that can be helpful is perhaps to remember that there is no 'destination'. In life, as in post-graduation. It is an ongoing process of becoming, of exploration, of

experiences. The 'next step' is just that. It's not the 'completion', the end or the start of anything. It's the next part of a continuum.

Part of our philosophy at MDXPD is that everything is a prototype. That includes us. Nothing and no one is ever finished. The snapshot of now, the current version that's always moving to the new. Keeping that and an open mind is important. Recent graduate Brady (See Pages 25-26) captures this elegantly, *"Be open to experience that may not be directly related to your field or interests and learn to think laterally. You will learn something from anything you fully participate*

in and will be able to apply what you have learned to things you are interested in later on." in reflecting upon his educational experience, but this applies equally to your post-education experience.

What then 'does' everyone do during this period? Lots of things. Our career trajectory research shows the next step in directions encompassing Service, Experience, Branding, Marketing, Digital Product, UX/UI, Industrial, Design Engineering, Design Crafts, Teaching, further study and lots more. Our graduates in this special feature reflect on those pathways, reflect upon their experiences, offer their advice, and lots more!

BRADY HANSEN

Design and Technology Technician at **Latymer Upper School**, Hammersmith



How was your time at MDX?

Starting the first year was one big adventure for me. I was living in a new country, studying something completely new, and trying to get the most out of the whole experience. In my first year, I focused on soaking up as much information as I could and stretch myself on every project. My biggest takeaway from first year was how to observe to world through a designer's eyes and see all the things and behaviors users are never meant to see.

Second Year was all about putting the things I learned first year into practice. I was fortunate enough become a Student Learning Assistant (SLA) for Year 1 and was able to pass on the things I had previously learned. Alongside being an SLA, I did my best get the absolute most out of the many great facilities Middlesex has to offer. I spent as much time as I could in the workshops, CAD rooms, and The Studio working on and iterating my designs for the year. It was in March of my second year that the first of

many COVID lockdowns happened and my classmates and I had to make the abrupt shift into studying from home.

Starting my final year, we knew it was going to be fully remote from the start. This was somewhat exciting to start with, but it did not take me long to miss going into campus. We all persevered and made the best of the time we had. Final year meant Final Major Project (FMP), and really having the chance to put everything I had learned into action. I initially struggled with forming a brief, but was supported through the process by my tutors and in the end, my FMP centred on designing and making in the domestic environment. Alongside the FMP, we had a number of other engaging projects and had the opportunity to work with a wide range of guest tutors and live clients throughout the year. The final push for the FMP was intense, but very satisfying to have it complete.

I am endlessly grateful for my time as a member of the Product Design programme at

Middlesex University. I felt supported and encouraged at every level of the program and know that the skills and experience I gained there will aid me long into the future.

What did you enjoy and what were your key learnings that prepared you for industry?

From the outset of the program, I was always interested in getting in on the making and technical side of design, so my time in the workshops and time spent learning CAD have been the most valuable to me since leaving the program. I have taken those skills gained in the workshops and CAD rooms and continued to develop them, which was only possible because I was provided such a strong foundation from the Product Design Program at Middlesex.

Alongside the technical skills, though perhaps less concrete, learning about the design process and gaining and exercising the skills of receiving and giving feedback have been incredibly valuable to me since entering into industry.

Follow Brady on Instagram @brady.t.hansen and @brady_t_designs
Connect with Brady on LinkedIn www.linkedin.com/in/bradythansen/

The Product Design programme at Middlesex has given me the ability to collaborate with confidence in the professional design world, an ability I would not have otherwise.

What was your first role and your key learnings/process for getting into industry?

My first role in industry was a furniture maker and machine specialist at London based furniture manufacturer called **Unto This Last (UTL)**, located in Shoreditch. UTL was a non-traditional furniture company, using Baltic Birch plywood as their core material, designing all of their products with CAD and then producing their baseline parts using CNC machines. I became aware of UTL on a Design Tour of Shoreditch, halfway through my second year. I was intrigued by a company that was doing full line manufacturing in London whilst also creating dynamic and attractively designed furniture at approachable prices.

My BA in Product Design was foundational in me being a valid candidate for the role and my previous workshop and mechanical experience were paramount in securing the position. After submitting my CV, and following up more than once to check on availability, I was offered an interview and an opportunity to do a test shift to see if I was the right candidate for the role (and that the role was the right one for me). After a successful test shift where I met the other furniture makers and made a chair, I was offered a full-time position starting immediately. During my time at UTL, I realized how valuable the knowledge and experience I had gained as part of the

Product Design programme at Middlesex University was to my success as a furniture maker. Insight into CAD, knowledge of design for manufacture, materials, exercising communicating ideas visually ("bad" is still great when it comes to sketches), and working & iterating quickly, served me greatly as a furniture maker and have continued to do so even now.

What you have done and what you are doing now?

I am now a Design and Technology Technician at **Latymer Upper School** in Hammersmith. I left UTL after 10 months, anxious to move away from the commercial sector and keen on finding a position in education, as I had been a teacher prior to my time at Middlesex. I was interested in positions that were still workshop based but allowed me time with students. Being inspired by technical tutors like Spike and Colin at Middlesex, I began applying for technician and technical tutor roles in both schools and universities. I was offered the position of DT Technician in Autumn 2022 and started the role in January 2023, taking over for the previous technician who was retiring after 15 years at the school and 30 years as a DT Technician. My job now is about 50% with students, providing one-on-one design help and assisting them in using machinery, and 50% workshop management, including supply management, maintaining our machines, and keeping the workshops in good working order.

What advice would you give to students on the PD programme?

+ Be engaged with what you

are doing. University is not only a huge investment of your money but more importantly, of your time. Show up on time, take notes, ask questions, and be fully present in whatever it is that you are doing.

+ Say yes. Be open to different experiences that may not be directly related to your field or interests, and learn to think laterally. You can learn something from anything you fully participate in and will be able to apply what you have learned to things you are interested in later on. This development of lateral thinking will help you be a great student, adaptive designer, and quality team member.

+ Learn how to confidently communicate in a polite and professional manner. Being able to professionally communicate through writing and speaking are key to not only finding a job, but being successful into the future. To be clear, I am not talking about having "perfect" English grammar or knowing all the "correct" words to use in a given situation. Composing thoughtful, professional emails, insightful CVs & cover letters, and creating engaging presentations will all go a long way to creating and maintaining a successful career.

+ Be clear to yourself and others about what you want to do as a career. Be patient in figuring out what that is and how to do it as a job. Interrogate your own desires for what you want out of life. Never work for free. Most importantly, never work for someone or any organisation that expects you to compromise your principles, values or wellbeing for a salary.

HUW MORGAN

Product Designer at **Wood Mackenzie**



I should start off by saying that the product design course at Middlesex University readies you for a lot more than the typical industrial design. After graduating, I went on to get a job in UI/UX where I am still working and am having a great time. The skills taught on the course gives a well rounded skill set that can be transferred to any job that has design thinking as a core component of the role. Most companies love someone who enjoys and knows how to make things in low fidelity first, are able to take a brief, interpret and respond to it, has an ability to take non-personal criticism on work, and so much more that the course teaches you!

My experience of getting a job after graduating may be a little different from most, as I graduated in 2020 and had to compete during the pandemic. But every cloud has its silver lining, the pandemic did allow me to get a job that was posted in Scotland.

After applying for maybe 100 jobs in a week (I don't suggest doing this as it's very draining and at some point you are just hoping someone responds), I had a couple of employers reach out. I finally got an interview with an energy consultant who was able to see transferable skills in my portfolio, something they saw potential in.

I currently work for that same energy consultant, **Wood Mackenzie**. I've dealt with their article portal, developed the sharing system, worked on their flagship tool in multiple roles and am now looking to potentially become a project lead and maybe help managing the next year of interns. They have really helped me grow as a designer.

I'm still new to helping hire people but from what I've seen, your skills get you in the door for an interview and depending on how well you demonstrate

those skills, you'll be able to open that door at different amounts. Your interview is really what matters. It is when you can show the company who they're hiring. As much as they'll like your work they understand that you'll be someone they will work with on a daily basis and the interview is an opportunity to let them know it's a good match.

And for you, what really matters is seeing if you fit the job and if the job fits you. Use the interview to see if you have a passion for the role, if the working environment and people is somewhere you can see yourself daily.

CONNECT with Huw Morgan on LinkedIn:

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BEN READINGS

Prototype Engineer at **JH May**



I graduated from BEng Product Design Engineering at Middlesex University in 2020 during the midst of covid-19, where the last two months of the course was completed online. Prior to that, I had a brilliant time at Middlesex and I enjoyed every second in the workshops and relished all the lessons and skills I gained. One of the main highlights of the product design programme was the approach to deadlines. The best advice I received in terms of deadlines was to finish a project at the halfway point. Finishing as soon as possible gives you plenty of time to actually finish it within the time, as the first "finish" will never be good enough. That is a skill that I have taken with me into industry when working on real projects with real-life deadlines.

Since graduating from Middlesex, I have taken on a role as a Prototype Engineer within a model making and design consultancy, **JH May**. Within this role, I am often given concepts that I need to realise and make into feasible and realistic products and designs. This is unbelievably rewarding,

as I typically see designs go from inception to realisation. I often install and finalise designs as well. It's a privilege to be part of the entire design process. I managed to gain this job through being passionate about what I do, but more importantly by talking to people and allowing them to not only see my innate passion for design and making, but also demonstrating the skills and knowledge that were needed to back up 'the talk'.

Alongside this, I also run vintage scooter repair shop. Although the majority of this work is mechanical, there is a lot of creativity too, whether it is creative problem solving for a mechanical issue or designing a livery for a race bike. Although the two positions are vastly different the connection between them is my passion.

If I could give just one piece of advice to students studying product design/engineering, it is to just do what you enjoy most. Work within your passions and show potential employers just how much you love doing what you do.

YUYEONG KIM

Footwear Designer, **Korea**

I had a great time at MDXPD. It was a huge plus for me, that we could use the university facilities to our heart's content. The moment I graduated, I knew that I wanted to further the skills and methods that were taught on the programme, and was keen on continuing to develop my practice and design process.

I feel that we were well-prepared for industry even though real life is very different to university. Being able to share and talk about our ideas freely in class, presenting to peers and clients allowed me to develop in confidence, which I valued and continue to build on.

After graduation, I prepared my portfolio with projects we undertook in the programme. Whilst product design is such a broad discipline, sometimes people don't know what they want to do. My first role in design was a furniture designer. Now, I am designing shoes at a Korean design studio and I am satisfied with the field I chose. We work on projects at the request of several companies that do not have in-house design. Recently, I am designing 'Kangol' and 'Head' shoes because a local Korean company has obtained licenses for various international brands. My role goes beyond ideation and designing, I also visit factories and participate in the full shoe-design and manufacture process.

One advice - if you have the opportunity to undertake an internship, I recommend you do it. It will be very helpful in the future. University and real-life go hand-in-hand. Also, keep asking yourself what you want to do...

ZÖE NEEDHAM

Industrial Graphics Design Engineer at **ELGA LabWater**



How was your time at MDX?

I loved my time at university! I really enjoyed the projects we worked on, especially the 'live' projects that were integrated within the modules. I had the opportunity to be a Student Learning Assistant and in my final year, a Senior Student Learning Assistant, which gave me the opportunity to support teaching and it was where I gained some amazing life-long friends. I tried to grab every opportunity and as many experiences as I could and I genuinely believe that they paid off. I learnt how to be part of a team and invaluable social skills!

What did you enjoy and what were your key learnings that prepared you for Industry?

I can honestly say that I enjoyed every aspect of my time at university. I often find myself fondly remembering being in the workshop with Spike and Colin, working on arduino kits with Andy in my second year and sitting in the Ritterman working with my peers and friends. My placement year with RedLoop as a Junior

Designer prepared me for 'the real world', going to team meetings, taking notes and writing/creating documents to show to clients and other professionals, working on my time management and being able to juggle multiple projects at once. Thank God they did, as now I'm juggling 7 projects at once!

What was your first role and your key learnings/process for getting into industry?

I am currently working as an *Industrial Graphics Design Engineer* at **ELGA LabWater** in High Wycombe. I've been with my team since November 2022 and I wouldn't change it for the world! I decided I wanted to do graphics or documentation after doing my placement at RedLoop with Andy and Kate. I landed this role by combing through job sites and uploading my CV everywhere I possibly could. I found this job through LinkedIn and was called by a recruiter who assisted me to get the job.

What you have done and what you are doing now? Working as an industrial graphic design engineer, I am solely responsible for all of our product manuals, labels, stickers, renders for the websites, product flow diagrams and other similar documents.

I also occasionally get to go downstairs to our beloved (and messy) workshop to build a prototype unit or beta unit, make cardboard models for my co-workers or just generally help around with other projects to give myself a break from staring at the computer screen, all day.

What advice would you give to students on the Product Design programme?

+ Put together a really good CV, browse and read through other people's CV (both similar to what yours would look like and completely different) and tailor it to the job you're applying for! I put all my design stuff first and left my other experiences to the end, following an order of what I thought would be the most helpful.

+ Apply to every job that catches your eye! I applied to over 40 different jobs and only heard back from a small handful - don't wait around! Start applying ASAP - the application process takes forever. After that you can relax! Make sure you take time for yourself, enjoy the break, travel, see friends and family, catch up on sleep!

+ Be yourself! Be confident in your decisions! I was offered a job I wasn't inspired by and knew I'd hate the environment and the work wouldn't fulfil me - I turned it down! Best decision I ever made. I'm now with a company that I love and believe in, and they regularly show me that they appreciate me and the work I do. The people I work with are amazing and the work I'm doing is fun!

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LIZZIE WHITTALL

Trainee Creative Designer at **Extreme Design**



For your first role after graduation, where possible, be flexible with where you work... However, after I got my first job, it only took me 2 months to find the next position. Once your foot is in the door, you are already in.

Hello! My name is **Lizzie Whittall**, I graduated in 2021 from the BA Product Design programme. I think the most useful part of the course for me was the theory and practice on manufacturing alongside copious sketching! A surprising amount of employers were very impressed with the fact I can sketch pen to paper - it apparently wasn't something that is common anymore. With manufacturing, I ended up going into interior design but having a base knowledge of how products can be manufactured has been incredibly helpful.

My first role in the industry was an internship for 3 months in luxury travel retail. This sounds a lot more complex than it actually was. Essentially, I would produce 3D models and technical drawings for the gondolas and backwalls of large companies selling perfumes and duty free items in airports around the world. It was a really cool job, but not as creative as I think I needed. As the designs were already made, I just modelled them and drew up the technical drawings for manufacture. This however gave me amazing experience in 3D modelling and in the detail eye needed for drawing up technical drawings ready for manufacture. And added a lot of reputable brands and names to my portfolio.

I am currently a Trainee Creative Designer at **Extreme Design**. A luxury kitchen company that creates the most gorgeous bespoke kitchens. This job is an absolute dream, I get to see the most beautiful houses and help design breath-taking interiors. I've worked there for around

8 months now and I'm having an amazing time. Within this role I draw the layouts, create visuals (3d models) and order kitchens. I also go on site, help measure up, keep the showroom running and selling to clients. It's the perfect mix of sales and design, which is where I tend to strive.

Some general advice, brush up on sketching as much as you can. For your first role after graduation, where possible, be flexible with where you work. This was one of the things that made it easier to get where I wanted to be. I was ready to move and go anywhere at a push of a button. I realise this isn't always viable, it's just something to keep in mind if possible to do so.

Final thing, don't be too hard on yourself if it takes many job applications to get where you want to be. I sent over 100 applications after graduating. However, after I got my first job, it only took me 2 months to find the next position. Once your foot is in the door, you're already in. It only takes a moment to get there.

Follow **Lizzie Whittall** on Instagram @[_littlewhittall_](https://www.instagram.com/_littlewhittall_) and **connect** on LinkedIn: [linkedin.com/in/lizziedraw/](https://www.linkedin.com/in/lizziedraw/)

ANDRES YOUSIF-ROMERO

Designer in the Innov8 Team, **The British Army**



How was your time at MDX?

I have really enjoyed my time at Middlesex University, despite having one and half years of it affected by covid. The programme team still kept the course engaging. The highlight was having the opportunity to work on a 'live' project with a real company to give us insights into real-life product design. A combination of independent and group based projects also made the course more realistic and enjoyable.

What did you enjoy and what were your key learnings that prepared you for Industry?

During my final major project, the tutors (Wyn, Andy and Ahmed), ask loads of questions to get you to justify and communicate decisions made. This is similar to the Army, when working with seniors, you have to be able to justify everything you do.

Why this? Why that? Based on what evidence? Prove this? What does this mean? (in the design process), as they want you to highlight key decisions and why one is more effective than another; to show that you have explored the brief and process in depth and in business (and army) justify where the money is going.

What was your first role and your key learnings/process for getting into industry?

My first role was a paid placement in the Army, in the trials and development unit. I made sure my portfolio was easily accessible, utilising social media to share it more broadly. I created a linktr.ee with links to all of the activities I undertake outside of product design, such as rugby, Army cadets, alongside my CV and Portfolio. This makes it as easy as possible for people to see

what you bring to the table. Another thing that has helped me massively is the ability to talk to people in any setting, being able to adapt. One opportunity came from speaking to a random person I was standing next to on a train, and it turns out he had followed a similar pathway and undertaken similar roles that I was aspiring to. Being active and on the move, constantly traveling etc. can also help put you in the right place at the right time. Then it is up to you to take the opportunities.

What you have done and what you are doing now?

I am currently training to be deployed with the Military for up to a year. However, prior to this I have done lots of stuff within the Army such as leading projects at the trials and development unit, and working at the largest additive manufacturing facility, the heart of all the design and making.

Currently, I have been working with the Innovation Team of 8 Brigade where we helped introduce AI and LLM to army headquarters at all levels to improve efficiency.

Outside of the Army, I have been working with an Unexploded Ordnance Company (qualifications from military). I also lead the design and innovation sector helping design and create products for replacement parts alongside designing products and generating concepts to submit for funding within the Army.

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What advice would you give to students on the Product Design programme?

- + Make sure you document your university work and projects as you go. It becomes harder (but not impossible) to go back and revisit it. Take lots of photos.
- + Make the most of social media and have a linktr.ee account with links to your CV and portfolio. Also include this in your email signature, as it gives any potentially interested people the highest chance of stumbling across your work.
- + Make the most of your network as 90% of the chances I got, were through people. Some- thing I live by is, 'if you don't ask, you don't get', so ask and the worst thing you will get told is 'no'.
- + Make the most of having less pressure on you whilst you are young - travel and give up some time to volunteer and gain the experience that everyone wants for a role.
- + Take a gap year to travel and work on your portfolio and really discover yourself and what you want to do. Don't rush into it, because once you are in the cycle, it can be harder to change.
- + Uni is the best time to volunteer to strengthen your skills, have lots of free time to try new sports and many other activities - often for free. Make the most of it. All of these activities make you more aware, confident and help develop your mind creatively.

IBRAHIM JAVED

Graphic Designer at **David Astburys**



I loved being a student at Middlesex University. I had a really good experience with my course and appreciated the learning dynamic. I enjoyed the relationships I made with peers and lecturers and felt welcome. I valued the learning experiences and the chances to implement my knowledge in realistic scenarios such as working with live clients from the design industry, presenting my findings to peers and superiors. I felt that we were taught comprehensively about all necessary design skills and tools to become a successful designer. I especially relished the lessons on Adobe Creative Cloud; Adobe Illustrator, InDesign and Photoshop. We would learn and complete exercises each lesson to affirm our knowledge.

I felt that I had access to everything I needed during my course, from access to work-shops and design labs, to software subscriptions etc. I also enjoyed the tailored industry placement programme that MDX offered via Redloop. It was real-life work experience and there was opportunities to earn from the projects we took part in as well.

As a result of learning the essentials of Adobe Creative Cloud software, I am now pursuing a career in Graphic Design. I have always been interested in Illustration and visual design and this course helped me to develop those skills and understand design from a wholistic perspective. I currently work for a small agency in London, doing graphic design and marketing related tasks for the company. I have designed website banners, tote bags, social media content and more.

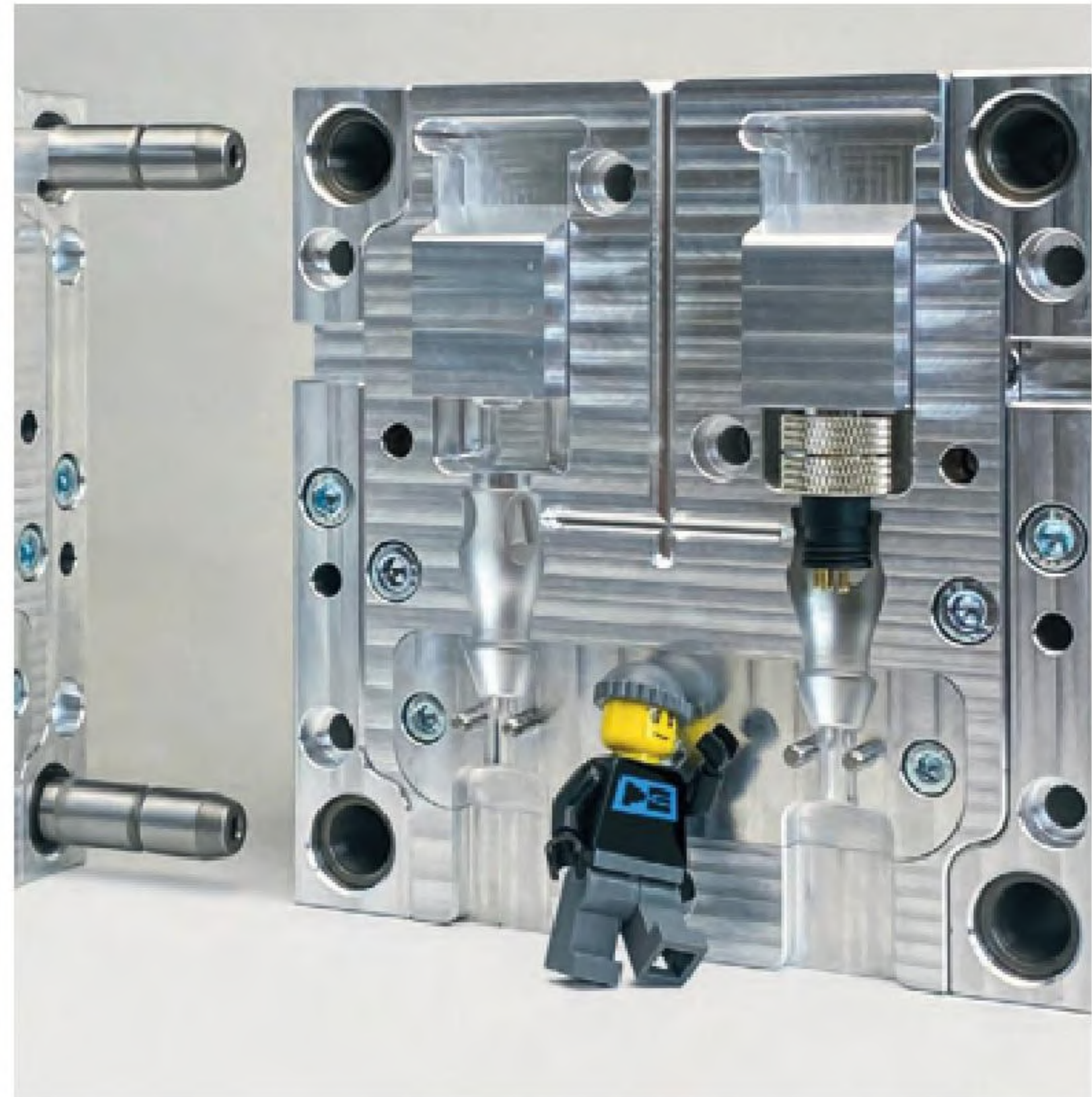
A few advices for Product Design students

Treat your projects like your own work. Would you add certain things or leave out certain things if it was a project for yourself? Use each project to test your limits and produce something that fully embraces your creativity. Don't just do it because it is in the assessment criteria. Make something that you would be proud of in the real world. Keyword; self-satisfaction.

And in terms of landing your first job, apply for any work within the design sector, even if it doesn't directly relate to Product Design. You have skills which are transferable and can be used in other creative arts such as, illustration, fashion design, furniture design and electronics design (for BEng students). Aim for smaller companies as they are more likely to appreciate you and invest in your development. You will also have more creative freedom to explore ideas and be part of a more interesting story.

TAUTVYDAS PETRUŠKEVIČIUS

Manufacturing Design Engineer at **Micromolds, Lithuania**



When applying for jobs, start early, start whilst at uni. If you can find paid placements, that's amazing too. Use University tools as much as possible to build a portfolio, go to community meetings and guest lectures to interact with professionals. Use LinkedIn as early as possible, it can open a lot of doors for you.

How was your time at MDX?

I have had an amazing time on the product design programmes because of the lecturers and their inspiring ethic, and a practical hands on approach to the studies. Physically, I was on campus and at MDX for 2 years, in the 1st and final year of my undergraduate study. My second year was spent on the Erasmus exchange in Finland, and during my placement I had the opportunity to undertake placements in Netherlands and Luxembourg.

The key aspect about our course I just loved, was a kind, warm and humane outlook at the students and their life situations, a deep passion for every single project we had, and just a warm and friendly overall studio environment. Friendships that I have created with my coursemates are amazing as well.

What did you enjoy and what prepared you for Industry?

Placement year definitely prepared me for industry. It was during this year that I learned new work ethics and work styles. At university, having an introduction and overview of tools and studio work was super useful, however, be prepared that you will need to relearn a lot of things and quickly! I have enjoyed doing physical prototypes, and solving design problems. The design and technical skills that I learned at MDX has helped me a lot.

Life after MDX

In 2022, after graduating from Middlesex University London, I was able to circumnavigate the planet. People often refer to me as an explorer, a restless soul who has roamed the globe,

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calling eight countries across three continents my temporary home. I am forever driven by the pursuit of uncharted territories, those hidden gems - still unknown and magical. My heart beats when I am surrounded by people with diverse life stories and unique ways of living. I am a creator, storyteller, and problem-solver. I have a deep passion for genuine human connections that creates lasting friendships and partnership between people from around the world. Journeying around the planet showed me that the world is like a gradient map - a blend of bright, contrasting highlights with overlapping zones of influence. Like the intricate interplay of flora and fauna in nature, human cultures have migrated, mixed, and evolved over centuries, spawning unique communities each with its own distinct culture, philosophies, food, music, design, and engineering. Despite the seemingly fragmented world we inhabit, I believe that design, technology, and art will always serve as the backbone for human connection. This is why I aspire to be a pioneer of design, a trailblazer who confronts challenges with unconventional methods.

What was your first role and your process for getting into industry?

Days after finishing university, I received the honour to be accepted for the Ambassadors for Summer Work scholarship sponsored by the US State department. This unique program invited a small selection of young leaders from around the world to visit the USA under work and travel

programs. I was selected to live and work in Santa Cruz California, at the Boardwalk amusement park. Located near the heart of Silicon Valley and with extremely rich cultural heritage and history, the Santa Cruz experience changed me forever. It seems so surreal but California dreaming is true! And I am talking both about the legendary song 'California dreaming on such a winter's day' and about the American dream in general. I have learned how to go with the flow, and how to accept people as they are, here in the moment.

Californians definitely know how to enjoy their life, similar to people in the mediterranean. I loved the passion, dedication for art, for making things work well and great engineering. I was working as a retail assistant and it was an unreal experience being able to interact with people from all around the USA. I received a recommendation from my manager to start an initiative of making marketing of our inhouse branding. This was approved by the vice president of the company. I was mentored by the vice president of the company and learned not to be afraid to express myself, be kind to others and just go for every possible journey.

I also had the honour to represent Lithuania in the Young Civic Leadership Summit, Washington DC. The USA state Department and CIEE organised leadership training was conducted with an amazing group of young

innovators and civic leaders. We went deeper into civic leadership secrets by learning from people who are working in the US Senate.

What are you doing now?

Currently, I work at a highly specialised niche manufacturer where we injection mold a wide range of high tech micro scale products. I landed the role from a local CV website, although I needed to simplify my CV in the application. As a manufacturing design engineer, my role is to manage the entire project, and includes mostly work with CAD (Solidworks & Fusion), to optimise designs for manufacturability, create mold designs, conduct research and design consulting. I took additional responsibility for managing the LinkedIn channels and communication. In a relatively short time, I had an opportunity to release more than a dozen components and products for mass manufacture. It is a fantastic opportunity to work with difficult and unusual solution needed on projects including electronics overmolding with polymers and some medical research projects.

What advice would you give to Product Design students?

When applying for jobs, start early, start whilst at uni. If you can find paid placements, that's amazing too. Use University tools as much as possible to build a portfolio, go to community meetings and guest lectures to interact with professionals. Use LinkedIn as early as possible, it can open a lot of doors for you.

ABDULAZIZ MOHAMUD

Designer at **SMASH_UK**



The end of university is a weird time, getting across the finishing line of the course and jumping into the opportunities that you spent your pre-graduation time anticipating for, however, if you don't have a role lined up, it can feel like you fell into an abyss.

Ok so first start with your portfolio, this needs to be perfect before you send it out to anyone. Make sure you don't share this with anyone for feedback until it's complete; these haters don't see your vision. Also make sure to constantly compare your work with others, you'll probably destroy your self esteem and productivity, but just think about all the appreciations your behance page will get when you can create a project with renders that look like other

people's work. Finally remember that even though you may be a work in progress, constantly changing and evolving, your portfolio needs definition - you can't apply to job applications with a half-baked version of it, so continue to improve it as you go.

You'd think that was how I officially became a designer, but... My first official design work outside of university was designing a menu for a friend of a family member. The thing you quickly come to realise about graduating with a degree from product design is that people either think you're a graphic designer, an architect or a handyman, designing physical products is the last thing that comes to their mind. The project wasn't my best piece of work;

probably breaking every rule of graphic design, but it allowed me to break from the loop of making 0.001% increment changes to my portfolio, and gave some stakes to what I had designed. It had to be delivered by a certain time and meet the standards of the business owner.

My second design role came from a failed interview. At the time the studio director was looking for someone with more experience with certain software that the studio used, but he liked my work, and when they had a project that required an animation they approached me. Note: The last time I did an animation was for the Birdbox project in

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first year, in 3ds Max, a software I no longer have access to, and the animation I did for that project was much simpler, so I did the reasonable thing and told them that I could complete the animation in a few days. Again, this wasn't my best piece of work, but it got done on time, and the studio included it in the full animation they gave to their client.

My current and ongoing design role is working for SMASHfest, this came about from a conversation with Wyn at New Designers. He spoke to me about the opportunity and how the skills I used for my FMP related to the project. Initially I wasn't sure how much I could meaningfully contribute, as it had been a while since I had undertaken design that required me to be out in the real world working with communities, but at this point I feel like saying yes to work that I feel underqualified for is my forte.

I already had experience with SMASHfest from live projects we had the opportunity to work on during our time on the Product Design programme. However, the project felt different as a real design role outside of university. It was no longer a mandated project that followed a formal process, with grading criteria that it would be marked against. The focus was on using our collective skills as designers to deliver the intended experiences and get the project past the finishing line. My part, although small, gave me a better insight into how ideas become reality by managing constraints. So, to recap I spent all this time

on a portfolio thinking that it would get me the jobs, only to find out that most of my opportunities came from having conversations. No one told me you had to work on developing skills and a personality. There's a lot to be learnt from your experiences, I have summarised the "official roles" of design that I have undertaken, but there are a lot more of the in between moments, the moments of talking to people, working an admin job, interviewing at companies that I thought were out of reach, completing design challenges, marking rejection emails as spam, going to exhibitions, taking walks, surfing the world wide web for new ways to procrastinate, etc.

Those moments, good, bad, and awkward, may have had a bigger impact on me than being hired for a job. Those in between moments push me to question where I fit in as a designer and how the opportunities that I initially looked to are so much more vast and varied than I imagined.

For the longest time, I was hoping to join a team where I could learn the ins and outs of design to become this amazing industrial designer that had a monochrome wardrobe, and could tell you why Starbucks coffee is trash, instead, I crave that burnt coffee diabetes inducing nectar. Back to my point, doing design work no matter how glamorous - makes us designers, and our ability to do work that we enjoy outside of a 9-5, for the most part, rests in what we chose to do. There's

a lot of resources available from upcoming designers to prestigious studios, explaining their thinking and approach to design. We can take those thoughts and apply it to our own practice, curating a diverse knowledge bank from "mentors" we can learn from. However, before you go off and print quotes to stick on your wall, it doesn't hurt to ask some of the other thousands of designers that have real world design experience, from my experience most people are willing to speak to you and give you some advice.

I learnt a lot from my time at Middlesex University. The most important things were: the importance of observation, the iterative process of problem solving, and embracing other people's perspective to create something special.

For the people who got this far and are overwhelmed by the amount of great advice I've given so far, brace yourselves, there's two more things: "Life's what you make it, so let's make it rock" - Hannah Montana.

And finally we're all constantly faced with new situations that require us to adapt so don't be afraid to step out of your comfort zone and start at the beginning.

FIND OUT MORE ABOUT SMASH_UK:

[linkedin.com/company/smashfest-uk/](https://www.linkedin.com/company/smashfest-uk/)

TOM MILWARD

CAD Designer at CNC Manufacturer **YOKE CNC**



How was your time at MDX? What did you enjoy and what prepared you for Industry?

I had a great time at Middlesex, the course structure is one of a kind. The modules and materials help you to establish strong roots for a design; drawing a story of how, what, and why something should exist.

My second home was the workshop. I loved the practicality of it and I picked up many useful skills. Before university, I hadn't used much workshop tools and machinery, so it was exciting to have it all at my fingertips. I remember learning about different joints and fixings, both of which I use on a day-to-day basis now. Additionally, I enjoyed the psychological side of design, understanding the different research methods used to help discover insights for an idea. It was also an eye opener to learn about considerations for inclusiveness when designing a product.

What was your first role and your process for getting into industry?

I currently work as a CAD designer for a CNC manufacturer called

Yoke CNC, a company that specialises in CNC manufacturing for Film and Tv sets. Their daughter company, Yoke Vans, is where my role lies. My everyday duties include building a variety of van racking designs to fit in vans of all shapes, sizes and brands. The racks are cut from sheets of 12mm ply and fitted together through the use of tabs, slots and screws. The racks offer storage solutions through shelving, drawers hatches and more. When building, I have to consider areas of weakness and find ways to reinforce a shelf without comprising space or conflicting with the van walls. We've recently updated our racking to be more modular, allowing our customers to move the shelves as they please.

It has been an interesting role so far, and I'm learning a great deal about a sector I didn't initially think I would be a part of. CAD was a skill I wanted to improve my confidence in and I'm happy to say, a year on from when I started at Yoke, I am thoroughly enjoying my CAD affairs! Having enjoyed the workshop at Middlesex, I'm

loving that I get to build upon my CAD skills alongside having a workshop next door!

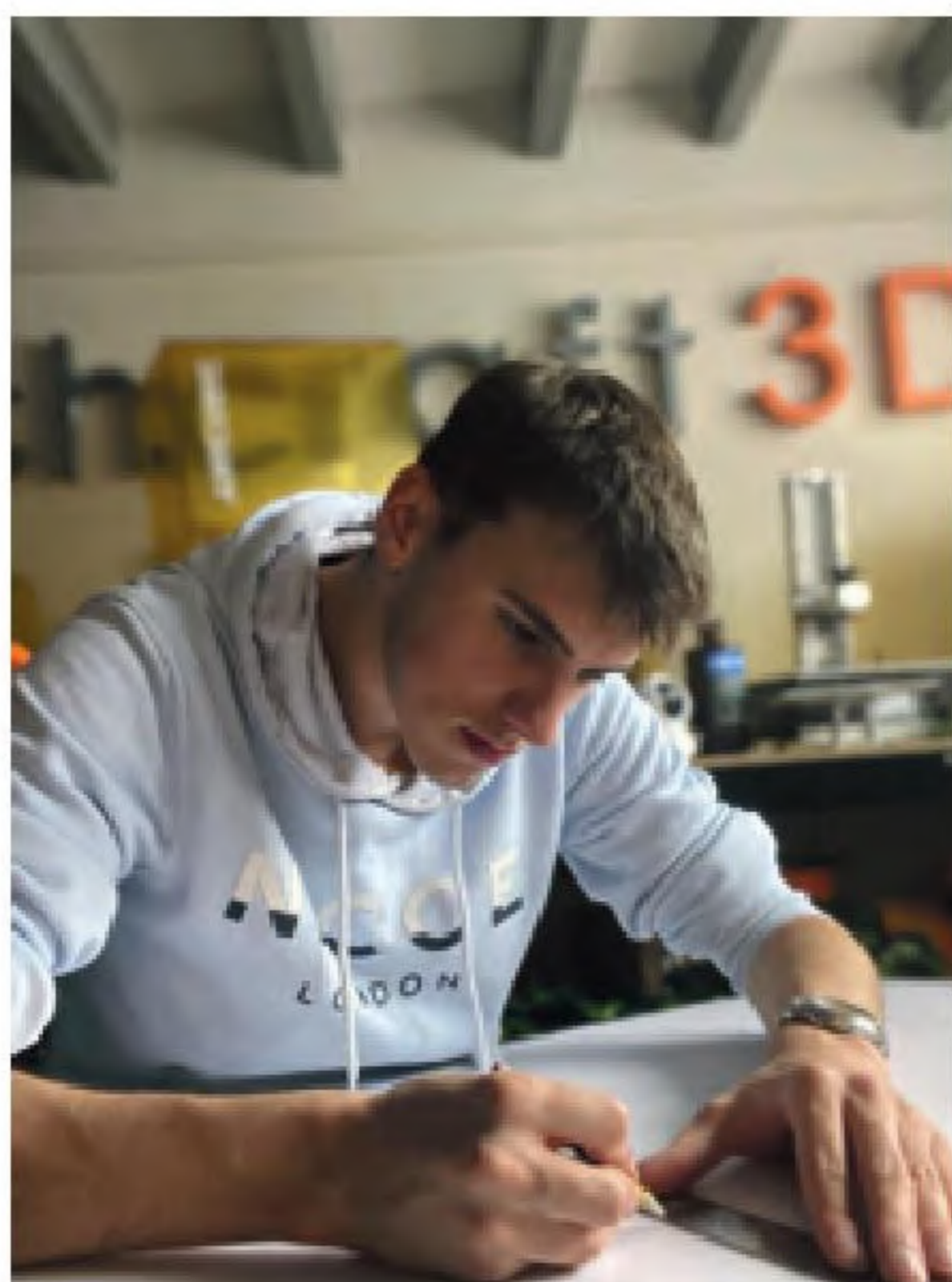
Though slightly different from the work I did at Middlesex, the design process is still clear, and running through it day in day out is helping to strengthen that designer mindset that I'll need for future roles in my career!

What advice would you give to students on the Product Design programme?

Explore ideas to the full, no matter how crazy you think they are, and don't be afraid of failure! Looking back, I wish I'd been a little more adventurous at the start of a project, by emptying my head of all the absurd ideas to get the creativity following. You can always refine it later!

In terms of getting a job and applying for places, just keep at it, no matter how soul destroying it may feel at times. The application rejections can hurt, but they're never personal and it just means that's not the route for you, yet.

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One will eventually say yes, and I highly recommend you take the opportunity rather than be picky about it because it'll often lead to great things anyway!

At interviews, take all sorts with you. Your portfolio obviously, but bring some of your actual sketches, diagrams, mind maps - anything to have a discussion about. Try to take along some prototypes too, even the unfinished ones to show them your progression and how you got from A to B.

FIND OUT MORE ABOUT YOKE CNC:

yoke-cnc.uk

TZU VIOLET TAO

Masters Student at **Loughborough University**



I came to Middlesex in 2019 through the exchange program. I was a direct entry student in the final year.

We started the final major project with a detailed exploration of the domain, finding opportunity areas, and moved onto forming a working brief and design specification. We had reached clarity on our final concepts when the covid-19 happened, which meant that we had to complete the final year remotely. I returned to Taiwan and finished the FMP online. Even though there were some challenging times in online studies, these experiences eventually became a strong foundation for when I started working in the industry.

Before graduating, I began connecting with designers on social media and sent my finished portfolio to designers on Instagram, allowing them to leave comments, feedback and follow back. One of the designers who responded, later became my design team member. We followed up from

the social media messages by running a small workshop offline with 3 participants, where we learnt about each other's skills. We shared good practice and helped each other with tips on how to render or build CAD models. Not longer after, one of the members said he had a webcam design invitation, which we worked on at subsequent skill-share workshops. This design project won the iF design and red dot design award, encouraging us to start our design studio.

I gathered my CV, portfolio, and started applying for a Masters in Product Design. I have always been a fan of Brunel and Loughborough's industrial design programmes, so I applied to both of these. So, once again, I returned to the UK to continue my journey in design, now at Loughborough University.

The main advice I want to share with students, from my ongoing experience, is seize any opportunity, even if you think it small, and run with it!

LAZAROS EFTHYMIADIS

Masters Student in Human-Computer Interaction Design at **City University**



Life after MDX

After completing my BEng in Product Design Engineering at Middlesex University London, I embarked on an exciting and transformative journey by pursuing a master's in Human-Computer Interaction Design at City University London.

During my undergraduate studies, I gained a solid foundation in the principles and practices of product design engineering. From ideation to prototyping and manufacturing, I developed a comprehensive understanding of the design process for physical products. Little did I know that this transferrable knowledge would prove invaluable when I went and transitioned into the world of Human-Computer Interaction (HCI) design.

Mastering Human-Computer Interaction Design

Enrolling in the HCID master's

program at City University London was a natural progression for me. Despite the shift from physical to digital design, the skills I acquired during my bachelor's degree became the foundation for my success in this new field. The ability to think critically, solve problems, and communicate effectively, honed during my undergraduate studies, formed the framework upon which I built my knowledge and expertise in HCI design.

The concepts of user-centred design and human factors, which I learned during my bachelor's degree on the Product Design Engineering programme, were seamlessly transferred to my master's programme. I quickly realised that understanding user needs, conducting user research, and iteratively prototyping and testing designs were as crucial

in the digital world as in physical product design. The systematic approach ingrained in me during my undergraduate studies became the approach and ethic I took with me in my work as an HCI designer.

Collaboration

Another aspect that both my bachelor's and master's degrees emphasised was collaboration. Designing products, whether physical or digital, is very rarely a solitary task. It requires effective teamwork, communication, and integrating feedback from various stakeholders. My experiences in group projects during my undergraduate studies prepared me well for the collaborative nature of HCI design, where inter-disciplinary collaboration is important.

Seeking New Opportunities

After completing my master's degree, I am eager to embark on my career as an HCI designer. Alongside my studies, I have also been actively involved in freelancing, allowing me to apply my design skills to real-world projects. Through freelancing, I have had the opportunity to work with diverse clients and tackle various design challenges, further enhancing my expertise in HCI design. In addition, this experience has strengthened my design abilities, equipped me with valuable insights into client collaboration and project management; and allowed me to enhance my portfolio.

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As I start to seek opportunities and venture into the 'real world', I am excited about the opportunities that lie ahead. I aim to apply my skills in creating innovative and intuitive digital experiences that enhance how people interact with technology.

With a physical and digital design background, I am confident in bridging the gap between both the digital and physical areas and bringing a unique perspective to HCI projects.

My journey from Product Design Engineering to Human-Computer Interaction design has been a rewarding and transformative journey. As I soon prepare to embark on my professional career, I am now armed with a strong foundation in design, have a passion for user-centred experiences, and the drive to make a meaningful impact in the field of HCI design.

The product design course at MDX was inspiring for me as an aspiring designer. The studio environment and nature of projects was engaging, allowing us to respond to interesting and meaningful challenges, build on and embed our visualisation and prototyping skills and learning how to design for people, with people, iteratively. The facilities, labs and workshops were world-class, and the teaching and technical staff were friendly, and supportive. Genuine well-wishers for our progress. I also built some amazing, hopefully life-long, friendships.

JOSEPH SALEM

Graduate Academic Assistant at **Middlesex University**



I am currently working at Middlesex University, assisting in the teaching of product design/engineering. Alongside that, I am also studying a master's degree in Creative Technology. The master's has been a challenging, but great experience. I come from a Product Design background which is more engineering/-physical based, and Creative Tech is more tech-centred, not too different from what I have studied previously. The challenging part is the coding. I have never been too good with code/processing. I stayed away from that in school, and found shortcuts in my BEng study when it came to that. However, I am keen to learn as it is a great skill to have.

My time at Middlesex University on the BEng Product Design programme was a fantastic experience. I came onto the course with a background in Art and Design, so I had that creative side. However, learning about designing for users was new to me, and something I had to understand and learn about more.

Middlesex university has great facilities and resources, including a workshop with high end technology, from laser cutting machines, CNC machines, and a range of workshop tools and machinery. The library is also a great resource, with high quality graphic printers, Macbook laptops, and a bonus – free printing.

My advice for students is to try their best. You have already committed to the course, and it's only 3 years of your life, so try to get the most out of it. Keep in touch with your colleagues/friends as when you graduate you can help each other. Always listen and have an open mind. And when you finish, you may think that it was a waste of time or you could have done something else, however, the skills you learn and the projects you do are very valuable and can even let you branch out into other fields. If I didn't work hard during my time, I most likely would not have been able to be a GAA, study for a masters, or made the connections I have with people in the outside world, do external work with clients, as I wouldn't have these skills to show.

Another piece of advice is to network. Whether it's on LinkedIn or real life, always talk to people. If you don't have connections already, then you need to try and talk to people, as it's very important. A lot of the time, opportunities come from the people you talk to. Even if you aren't good at it, try, as you can only improve and get better.

ELENA VESELA

Masters in Human-Computer Interaction at the **University of Birmingham**



...when building a good portfolio, showcase your work in context. If you don't have enough work, find a case study and do a project on it. And don't stop learning. I have always thought that this is the biggest cliché, but it is definitely true!

I look back fondly on my time at MDX where I was able to meet a lot of great people that I am constantly in contact with, and also learned skills that I now use in my professional life.

The Product Design course gave me the opportunity to figure out what direction I wanted to take my career in. For example, the basics of UX design and user research that I learned at MDX, I now use in my work. The lessons (at MDX) and learnings on programming and working with Arduino, was used to complete one of our projects when studying at University of Birmingham.

After studying at MDX, I was interested in user centered design, so I went on to study Human-Computer Interaction Masters degree at the **University of Birmingham (UoB)**, which I am currently finishing.

Whilst my studies at UoB were primarily based around computer science, I was able to apply my knowledge that I gained from studying at MDX. Before I applied for the masters, I had to learn the basics of programming where I completed a Harvard CS50 course (free course focused on programming basics). This coupled with studying Product design at MDX helped me to get in. Thanks to studying at MDX I had a noticeable advantage on projects that focused on design and I also had the opportunity to apply things that I have learned.

Last summer I joined Accenture, where I currently work as a Business Function Designer and my job is to analyse websites of a major car manufacturing company and subsequently optimise

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them. Before I started working full-time, I was volunteering at a non-profit organisation People in Need, where I worked as a Media department volunteer and got my hands on preparation of newsletters and creation of marketing related content.- Following that, I decided that it was time to get some paid working experience and started as a intern at Accenture. I joined the Strategy & Consulting department and worked on a project of Digital Asset Management migration. To get the internship, I had to show a series of skills - from analytical to creative. I also completed a course on SQL and basics of data analysis.

In my free time I also work as a UX Designer and help businesses - my biggest client so far was a Czech Computing School, which I helped by designing their e-learning interfaces. Skills I have taken forward from my final major project at MDX.

A few **tips and advices** I would like to share with current students: don't be afraid to go into practice. It definitely helped me during the covid period, when I had enough time to do things, and I looked for opportunities to improve myself and build my portfolio. On that note, when building a good portfolio, showcase your work in context. If you dont have enough work, find a case study and do project on it. And don't stop learning. I have always thought that this is the biggest cliché, but it is definitely true!

ELISKA TICHA

Masters in Interior Design, University for the Creative Arts



Hello everyone, my name is Eliška and I graduated from Product Design at Middlesex university in 2021. During my studies at Middlesex I have gained many valuable skills and experience such as communication, sketching, developing design briefs and concepts, working on projects as an individual, but also in groups. Studying at Middlesex helped me to get into Master's, I have graduated from Interior design course at University for the Creative Arts in 2022, I have been working on several projects such as creating an entertaining centre for children with Autism, design concepts for restaurants, cafes, schools.

After my studies in England, I moved back to my home country, Czechia, where I started my career as an Interior designer for a kitchen studio Sykora Home in Brno.

I am now working on projects and coordinating all stages of design, from initial sketches, drawings, 3D renders to a complete realisation of the interior.

I would definitely recommend Middlesex University for studying Product Design, especially the tutors who make the programme enjoyable; Ahmed Patel, Wyn Griffiths, Spike, Colin Moss, Andy Bardill and Kate Herd, who are knowledgeable, absolutely amazing and each of them will help you to reach your dreams and goals.

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GUOHONG XU

Design Engineer at **Omega Dot** and Student at Kingston's **Toy Invention Programme**



How was your time at MDX?

My time at Middlesex was extremely valuable. I thoroughly enjoyed the time on the Product Design programme. Lecturers were always there for you when you need help and advice. Super-friendly technicians and a resourceful prototyping workshop are available when you need to convert your dream into reality. The diversity of my cohort also encouraged me to be more adaptable and knowledgeable in my personal and professional networking.

Before joining MDX PD, I did not study Product Design at A-level. I had a background in Art and Design, making things that I thought was cool and entertaining to me. However, I always wanted to work in the Toy Industry. So I thought... Toy Design? But there wasn't any Toy Design courses in London at that time. However, there were several

Product Design courses. Reading was not my strong suit, so I visited several university open days. I felt the warmth and a welcoming atmosphere when I visited Middlesex. It was only a few hours, and I thought to myself, "This might be it." I must say, this is not a very logical approach to finding a university, so I don't advise you to do this. But I would say all university courses will have more or less the same facilities and lesson structures, but different approaches. Ultimately, it is up to you to accept their approach to teaching.

It's 2023; you can do and learn anything, anywhere now. If you wanted to, you will find a way. Studying at a university allows you to learn, hone, and excel with friends and industry experts in close proximity. For me, following my gut feeling turned out to be great.

What was your first role and your process for getting into industry?

About a year and a half after my graduation, I landed my first job as a Design Engineer at **Omega Dot**, an Engineering Consultancy that was working on an Innovate UK grant project. It was a turbo air purifier with germicidal features to help stop the spread of COVID-19 in the neighborhood of Hayes. I was responsible for designing, prototyping, testing, and arranging field trials. The project ended up being successful, and I stayed and worked on the next generation of the product and we successfully patented the design. I am now responsible for the production of our main product, air foil bearing, a type of oil-free bearing for high-speed machinery, like compressors for fuel cells.

Follow **Guohong Xu** on **Instagram** @gx_design and **Connect** on **LinkedIn**: [linkedin.com/in/guohong-xu/](https://www.linkedin.com/in/guohong-xu/)

I am also responsible for product inspection & testing, designing test rigs, client communication, and internal R&D. The experience was intimidating, feeling like an imposter, yet familiar. Everything I've learned back in university is used; they are transferable skills, but I also learned many more.

Job hunting wasn't easy for me. As a proud introvert and not too gifted in presentation skills, my CV and portfolio aren't something that qualifies to be seen as an example. But I was fortunate that I was hired for my current role due to my honesty. During the interview, I was honest with my interviewers and the Director of the company. I expressed that the main reason I wanted the role is because, firstly, finding a job has been difficult during the pandemic, and I do not have much knowledge in the field of Turbomachinery, air foil bearings, etc. But I do have experience in R&D, 3D CAD, and workshop experience from university. Secondly, starting my own Toy Design/Invention company was my ultimate wild dream, but I lack experience in both actually doing toy design and invention, running a company, and manufacturing. Since the company was a small company of 2 people at the time, I thought this might be a great opportunity to watch and learn about how to run a business and the manufacturing process, both in-house and outsource.

They company were surprised by my honesty. They mentioned it would be a steep learning curve, they tested me on my

knowledge of 2D technical drawings of a compressor assembly and my understanding of the air foil bearing and air purifier. Of course, I failed most of them. And they knew I would beforehand. But they were looking for my ability to look at the details, the thought process, the willingness to learn.

A few days later, I was offered a placement role to work on their Innovate UK grant project to prototype theirs and my vision of the air purifier, bring it to life with testing and field trials within approximately 6 months. The takeaway from this story, I guess, is the skills I've learned from university are really transferable. Once again, my approach isn't really advisable. But there are companies that are interested in investing in new generations and what experiences they can offer you in return for your time and effort. Other things to mention, a junior position is for people to use what they've learned, to be validated, and to improve in that particular industry. Look out for small companies and startups who are working on a grant project; they often offer junior positions due to their budget.

What are you doing now?

Now that I have been in the same company for over 2 and a half years, I have yet to forget my dream of pursuing a career in the Toy Industry. I am currently working part-time and enrolled in a Toy Invention Programme, which is the first ever in London. Here, I learned the difference between Toy Design and Toy Invention, the process of Toy Invention, and how to pitch to

Toy manufacturers. We are taught by one of the best toy inventors in the UK, Chantel Drenthe from FUSE London, and Gary Piper from Fun-damental Invention, who was a Guest Lecturer in the 2nd Year at MDX. Through this course, it has reignited my passion for toys, and I am excited for my future onward.

What advice would you give to Product Design students?

My advice for graduates (anyone really) is to be curious. I was once taught that there are no stupid questions. If you don't know something, just ask or research it. There will be people smarter than you, who know more than you, but do not let that affect you; it means you have room for growth. Do not get intimidated by them; ask them questions. 8 out of 10 times, they are nice people and willing to share their knowledge with you. If you have the willingness to learn, adapt, and execute correctly, any skills can be transferable, bringing new perspectives to the subject.

FIND OUT MORE ABOUT OMEGA DOT:

omega-dot.com

FIND OUT MORE ABOUT THE TOY INVENTION PROGRAMME:

toyinventionksa.co.uk/

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ANIMA

Customisable Gaming Mouse for Accessibility in Competitive Gaming.

The **ANIMA** is a customisable gaming mouse designed to maximise customisability and **improve accessibility** and **inclusivity** in the **competitive gaming** scenes.

The ANIMA features removable side attachments, front and back mouse buttons, palm-operated mouse buttons as well as an innovative rotating sensor that allows the user to hold the mouse in the orientation that's most comfortable for them.

The purpose of this gaming mouse is for people with disabilities that affect their **hand dexterity** to be able to customise the mouse to a shape that feels comfortable for them but also offering precise movements and aiding with the repetitive clicking.



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HAPTICZ

Wear, Experience, Enjoy.

Hapticz provides **immersive feedback** for **e-sports audience interaction**.

Viewers are usually alone, at home, and miss the collective, visceral experience of a shared live sports crowd. The e-sports players/streamers are fully immersed in their game world, while the viewers watch through a passive portal. The Hapticz system creates a **customisable wearable** that embeds the viewer into the active, interactive, immersed state of the player, enabling them to 'feel' the action and connecting with other viewers in that shared experiential state.

Hapticz is a system built around haptic feedback modules that can be worn around the body and represent the on-screen action through a range of haptic interactions – jittering, pulsing, and directional vibrations.



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ASTRAL

Bring Your Story to Life with Interactive AI Projection Mapping

Astral combines **projection mapping** with **contextually aware AI** that tracks users choices and interactions through the use of dedicated and/or evolving user generated Tangible User Interfaces (TUIs).

Rich mixed reality play, learning and event enhancement has emerged as a powerful mechanism for immersing participants and enhancing experiences. Systems available are generally bespoke or cost inaccessible. Astral brings an **open-source** (digital and physical) approach to the landscape, creating an accessible and adaptable kit designed for use and development using home laptop, simple off the shelf components and a desktop 3D Printing.

If you're telling a narrative, teaching a subject or exploring your creativity, Astral provides a new way to enrich your

experience with an easy to use, plug-and-play system for a multitude of story applications.



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EXTENDO

Travel Longboard - Store, Carry & Switch Styles with Ease.

Almost every longboarding enthusiast has a collection of longboards. To travel with and transport multiple boards during a trip is logistically problematic and increasingly expensive. **Extendo** is a single, cabin size, carry on board, that extends through three configurations:

- + Carry on size
- + Medium cruising and commuting
- + Full length longboard

Extendo can be transformed into multiple lengths for different contexts of use. It is easy to store and carry, with no need for multiple decks, and gives the user an option of switching between different styles whilst on the move.

Different longboarding categories usually have the same general layout and share the same parts, ie. trucks and wheels. In most cases, the only

difference between boards is the deck length and shape. Extendo uses this opportunity area to encourage the user to explore and use different styles through a single item. It removes a significant user pain point, makes longboarding more economical and sustainable, and allows better creative expression.



TAUTVYDAS PETRUŠKEVIČIUS
 PRODUCT DESIGN BA

SEVEN YEARS ON...

Where Are They Now? **Middlesex University's** Product Design Class of **2016**



MDXPD 2016 - '7 Years On'

In 2018, we did a '10 Years On' feature exploring where the 10 years since graduation had taken our 2008 graduates - see #MDXPD 2018 Magazine for the full story. Their stories and career paths were rich and varied - now '15 Years On'.

In 2021, we thought we would look at what our graduates from 2016 have been doing, and where they've got to, in their 5 years since graduation. Although a much shorter timescale than the in the previous feature, the outcomes are again exciting and enlightening. The range of

pathways, the range of careers, the range of experiences... they all highlight, again, both the fantastic creativity and capabilities of our graduates and the wide and ever changing future possibilities that Product Design and Product Design Engineering study offer.

Have a **read** about everyone's journey and current situation across pages 29-54 in the 2021 magazine. Like the '10 Years On' feature in 2018, both make for a fascinating and inspiring review of the power of creative education, and the positive impact that talented, driven young people can make on the world.

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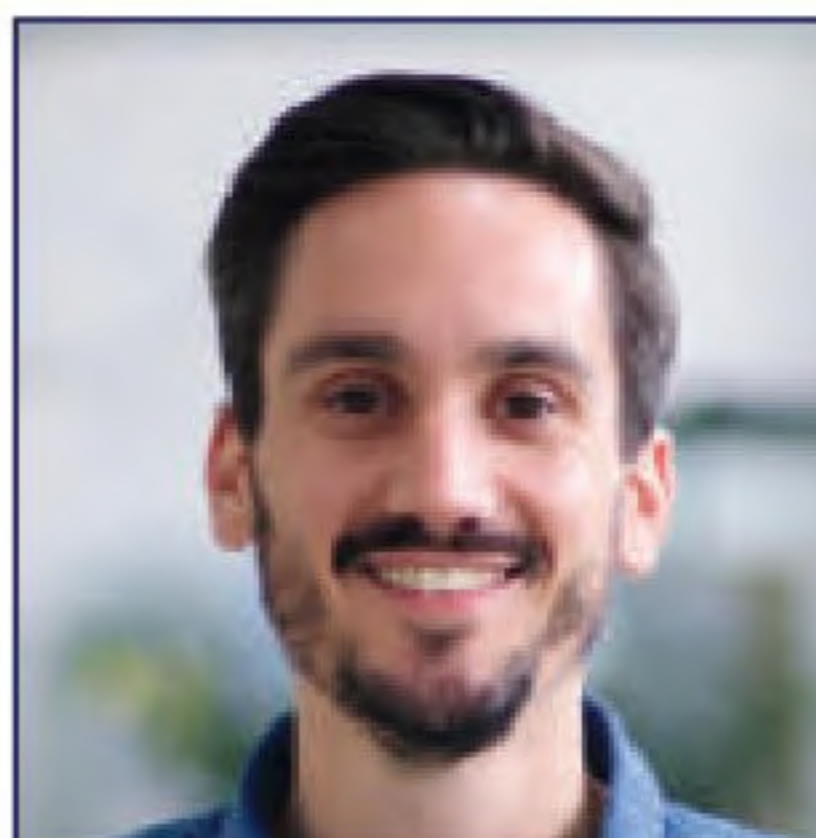
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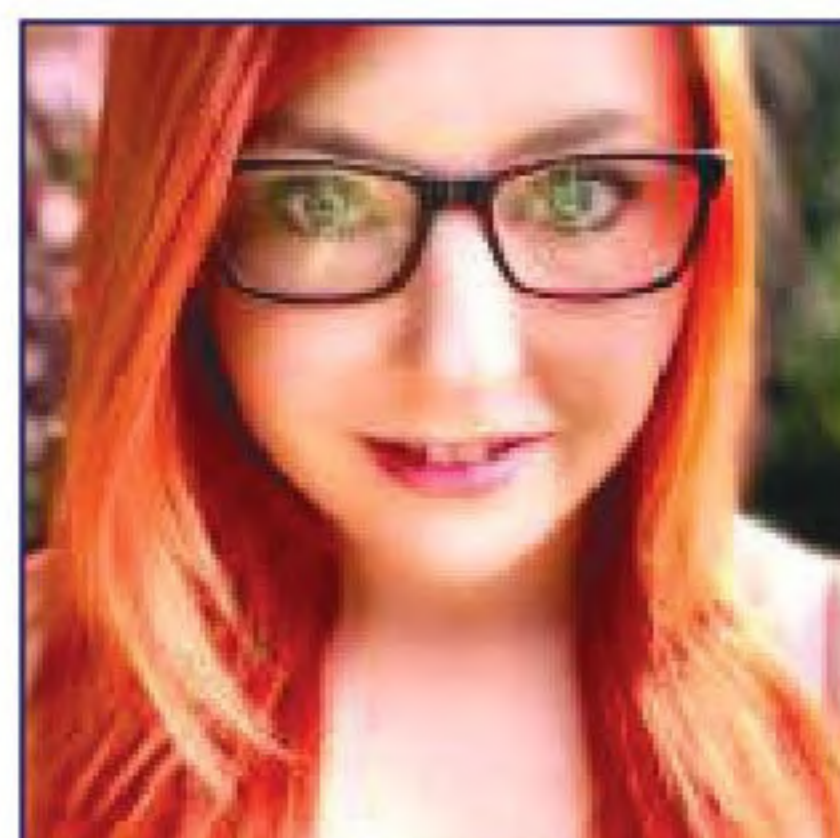
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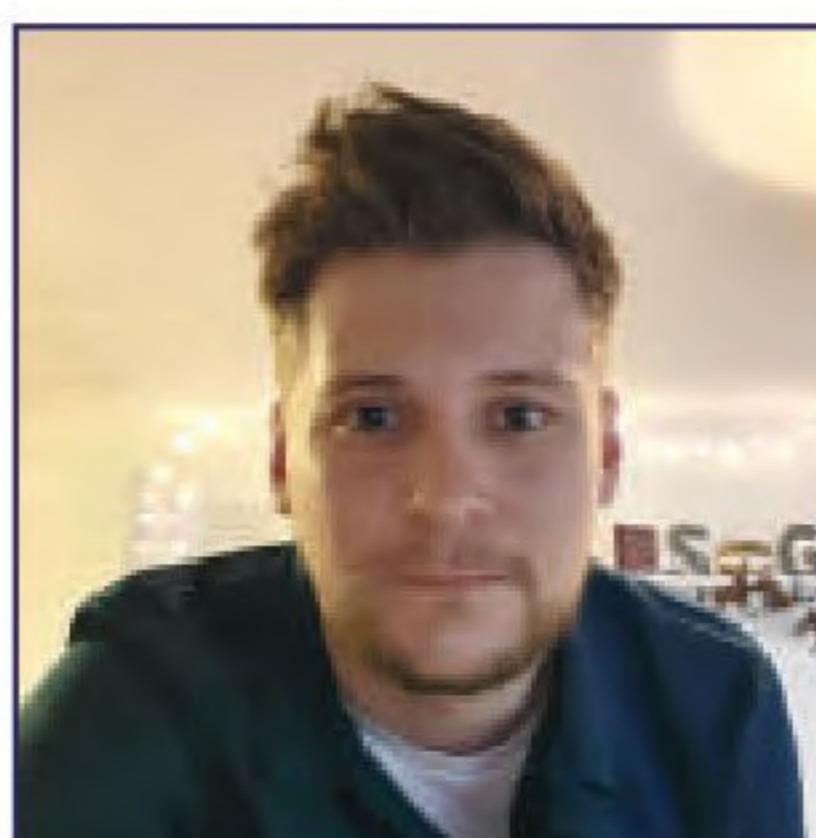
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15 YEARS ON. WHERE ARE THEY NOW?

A glimpse into some of the diverse careers and pathways of **Middlesex University's Product Design** class of '08 - **PDE Produce**



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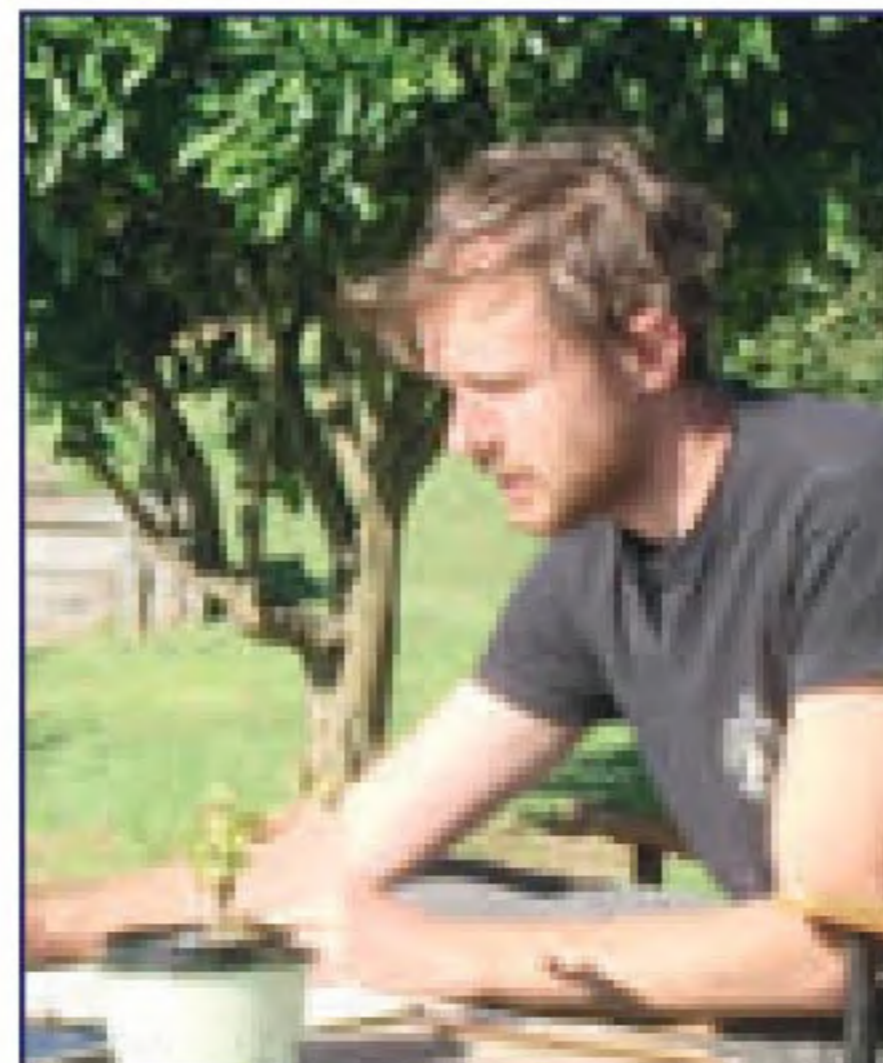
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PDE PRODUCE

'The Field of the 2008 Designers'

www.pdeproduce.com

PDE Produce caused a stir internationally whilst still in the Final Year & before graduation. Read some of the stories and articles online at www.pdeproduce.com Articles include:

- PDM Student wins Prestigious IMechE Prize!
- Adam Amos and the PDM Impress Core77
 - Ben Arent catches Frech imaginations
 - Adam Amos is in 'DesignWeek'
 - Robin Read – Front Page News
- jive + betty hit the international blog-o-sphere



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ROBIN READ

Engineer's time at **Middlesex University** inspired passion for building robots



It's okay to not be sure what you want to do after leaving school and studying on a course that has breadth can play a really big role in helping you discover what you want to do because it can expose you to so much.

Associate Principal Robotician and MDX alumnus Robin Read is grateful for the 'transformative and deeply insightful' education that has allowed him to develop a career in robotics.

When he started his Product Design Engineering degree on the Trent Park campus in 2005, all Robin knew was that he 'wanted to build things'. "The course was fantastic as it exposed me to a really broad

range of aspects relating to Design and Engineering," he said. "I was given sketching lessons, learnt about different approaches to prototyping, how to use software and how to build electronic circuits. I even built my first mobile robot in the first year!"

The final year project on the Product Design Engineering programme allowed students to work with metal machining equipment, laser and water

Connect with Robin Read on **LinkedIn**
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jet cutters and 3D printers. Fifteen years on from MDX and graduating, Robin is enjoying a successful career in the robotics industry but still finds himself still drawing upon things he learnt while at MDX. "When I look back, the course was truly pivotal for me in two ways - firstly it helped me discover what my passion is - building robots. Secondly, and crucially, I came out with a really strong skill set but was also able to identify what skills I still needed to develop in order to really feel ready to go into robotics."

After studying for an MSc in Robotics then a PhD in Human-Robot Interaction from Plymouth University, Robin became aware of a robotics programme at Dyson. He now works in the company's Future Robotics Research group, leading a small team of engineers looking at Human-Robot interaction.

Robin said: "The general goal and mission of our work is to look to the future. We look at the emerging, cutting edge technologies in the robotics world and explore and understand how those could be used to enhance or enable future Dyson robots over the next five to 10 years."

Robin's team focuses on building autonomous robots that work in the home

environment. "While we currently only sell robotic vacuum cleaners, we're pursuing all kinds of weird and wonderful ideas in the background, and we're particularly interested in the world above the floor," he said.

So what does a typical day look like for a Future Robotics Researcher at Dyson? Robin said: "I need to consider and steer what we do, but most of my time is focussed on the practical engineering that goes into building working prototypes."

"I tend to be primarily software focused (as that's where most of the magic happens in robotics) but I work with Mechanical/Mechatronic/Electronics Engineers as well as Product Designers as part of the process. Because of my background, I have a good feel and appreciation of the different aspects; why they are important and how they interact and impact each other."

Robin's main career aspiration is to put at least one robot out in the world that has a positive impact on people, and ideally have gone on the full journey from product/idea conception all the way to production where something comes off the end of a production line. He said: "Building robotics is

really hard and complicated, and requires such a diverse range of skills and steps. One day I hope to be able to point to a robot and tell people that I worked on it."

Robin's advice to prospective students and those going through clearing is: "It's okay to not be sure what you want to do after leaving school and studying on a course that has breadth can play a really big role in helping you discover what you want to do because it can expose you to so much."

"Be open minded to what modules you'll take, some might not take your fancy, but some might really surprise you."

"Get an idea of what equipment you will have access to during the course and make sure that you understand what doors it might open for you. Going to university is perhaps one of the investments into your personal skills development you will ever make and it's worth being sure that you're investing your time and energy in the best way and in the right area."

Article first published online:
<https://unihub.mdx.ac.uk/student-life/news/2023/mdx-alumnus-working-on-technology-of-the-future-in-dyson-robotics-team>

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FOCUS ONE

An Immersive AR Device that Replicates Penalty Shootout Pressure.

Many players dislike the concept of a penalty shoot-out to decide the outcome of a game. Clubs and teams are always on the look out for any method that will give their players a better competitive edge.

Focus One is an augmented reality (AR) headset device that replicates the **heavy pressured** penalty shoot-out that an elite player will experience.

This device aims to help improve the player's capabilities in dealing with the pressure by presenting the pressure to them throughout penalty training. The device has many **immersive scenarios** of the penalty shoot out, as players experience and deal with pressure differently.

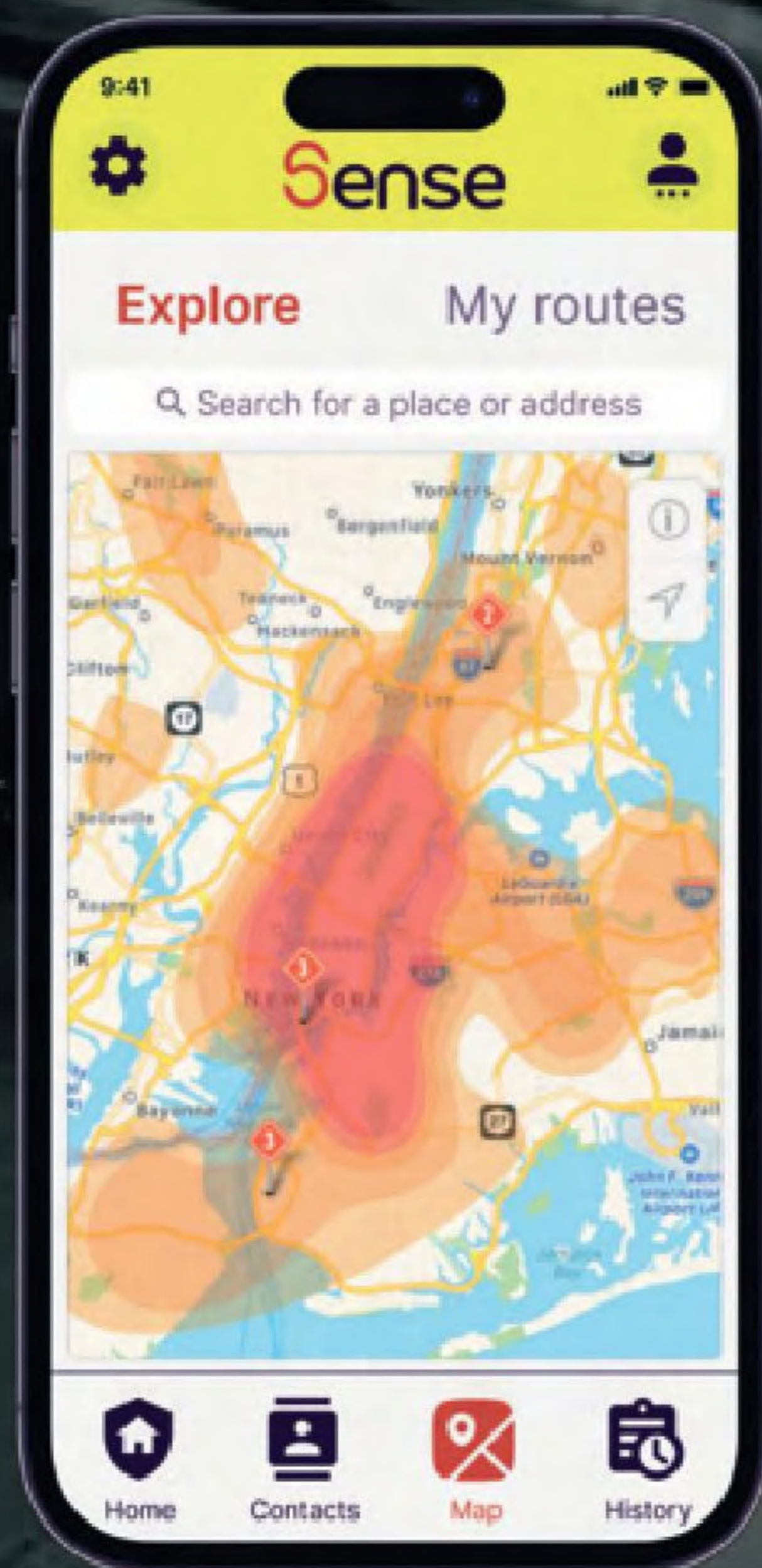
Every practice/training, **data** will be collected to help the coaching team

devise and train towards the **correct penalty strategy**.

Features such as the crowd noise audio can be customised and adapted to either previous penalty shoot out or upcoming ones.



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PRODUCT DESIGN BA



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SENSE

Empowering Your Senses, Securing Your Wellbeing.

Sense is designed to help people navigate dangerous situations with ease. It is **small and discreet**, making it easy to carry with you wherever you go. It can be concealed in your pocket or purse, and its sleek design means that it won't draw attention to itself.

Haptic motors provide **feedback** to guide you away from potential danger. If Sense detects a potential threat, it will indicate that you should change course or take another path. Sense also features **force sensors** that detect how hard you're squeezing the device indicating danger by simply squeezing it tightly. Sense will respond by activating an **emergency alert system** that will notify authorities and provide them with your location. This can be a lifesaver in situations where you might not be able to call for help or communicate your location.

Sense is also easy to use, its **intuitive** design means that anyone can use it making it an ideal safety device for people of all ages and backgrounds. Sense is a game-changer when it comes to personal safety. With its advanced features, discreet design, and ease of use, it's the ultimate **safety companion**.



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EASE

Easing Undiagnosed Neurodiverse Driven Anxiety Through Personal Physical Products

Feeling overwhelmed can be a challenge for **neurodiverse women** to deal with subtly, out and about in their everyday lives. **Distraction** and **reassurance** through **physical contact** is an established method of relief for **anxiety**. Current solutions focus on 'medical' or 'technological' manifestations.

'**Ease**' has been designed to offer a wide range of 'jewellery' platforms, with a large variety of textural reassurance configurations to enable people to create a totally customised wearable that fits into everyday life and work environments. Supporting non-prominent and private reassurance behaviours and enabling the best personalised texture and configuration of reassurance/distraction inserts. 'Ease' does this by offering a range of subtle and totally customisable 'jewellery' pieces; bangles,

pendants, keyrings, with a full range of customisable sizes, a wide choice of materials and design options, and a configurable range of anxiety management tactile fabric inserts that allows the wearer to insert a variety of tactile fabrics of their choice to support a reduction in stress, discomfort, anxiety, or panic.



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INSIGHTFUL

Enhancing the Reading Experience Using OCR, Eye Tracking and Generative Music.

Insightful is a face device that seeks to revolutionise the experience of reading. Once turned on, Insightful immediately begins generating unique, **dynamic soundtracks** that **synchronise** with the user's reading journey, **adapting** to the content and pace of the reading. This soundtrack consists of **ambient melodies** and **sound effects** which work to fully immerse readers in a story as well as improving comprehension.

Insightful can be used at home in leisure time as well as in schools for reading time helping children to sound out words and associate sounds with words helping to memorise and develop their vocabulary.

Insightful **redefines** the way we engage with books, **igniting imagination**, fostering understanding, and **prioritising the user's**

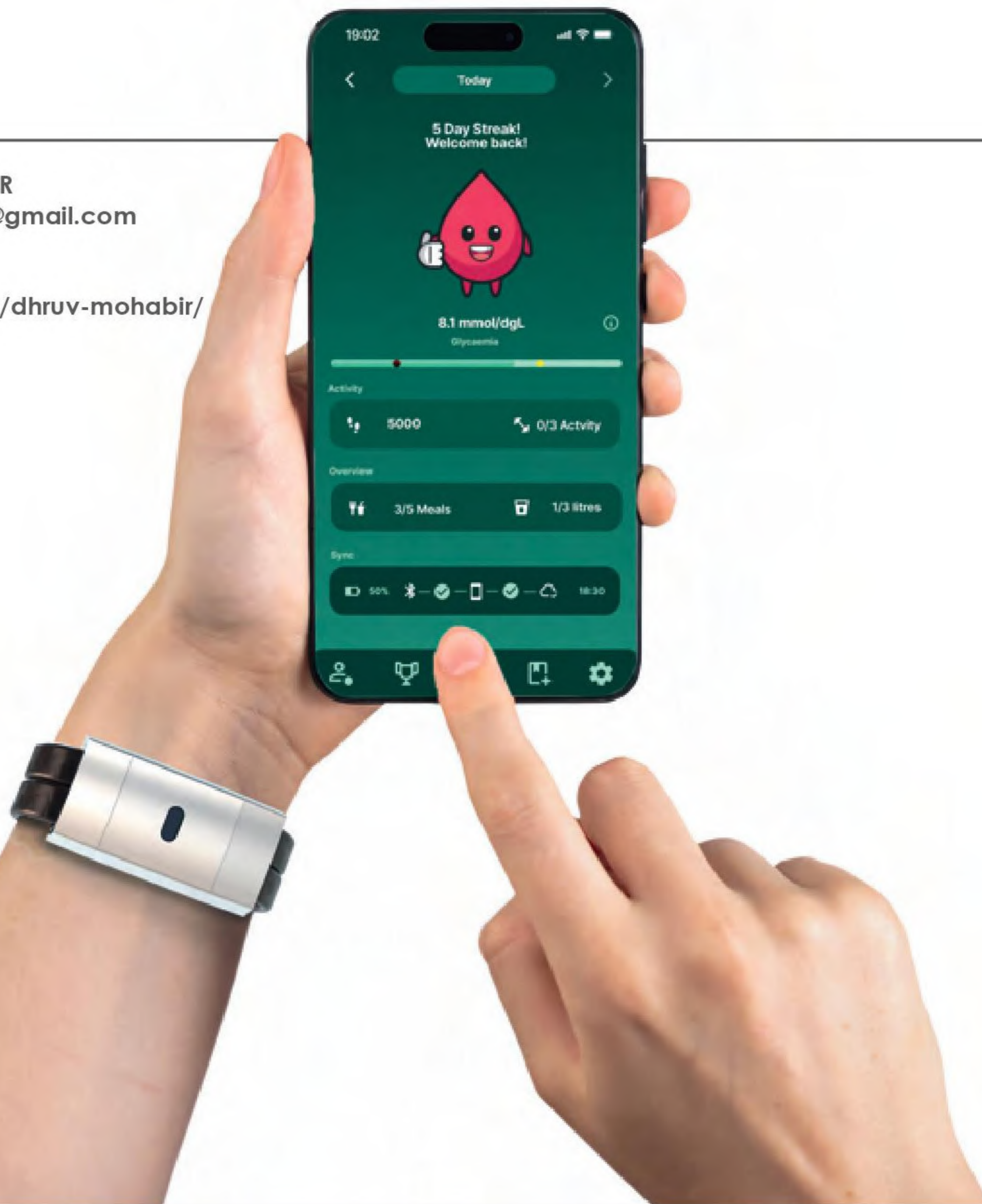
well-being and enjoyment; an insightful way of keeping the joy of reading alive.



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Anonymous. Your Digital Friend That Doesn't Give Up On You!

Glu, the anonymous non-invasive Glucose Monitor, with a behaviour nudging Friendly App that tracks glucose pre/post meals and activities and suggestive notifications.

Glu is for people who have problems with their eating habits and helps screen for pre-diabetes. Glu's unique selling points are that the wearable affords anonymity, with braided leather bands that blend in with the user's outfit and avoids drawing attention to the wearable, making the user feel secure. The novel magnetic band and magnetic inserts for adjustments are innovative, not yet featuring in other wearables. The app utilises a character, "Glu" to facilitate word of mouth and also educating users on the impact of food on their blood sugar. Educating users on the effect food has helps them make mindful choices.

Users can also log their meals and workouts, and see the before and after glycaemia allowing them to visualise and understand the effects of the food on their blood sugar.

Glu is your friend and wants to see you win!



DHRUV MOHABIR
PRODUCT DESIGN BA

CONNECTING SCHOOLS TO NATURE IN NORTH-EAST ENGLAND

National Lottery Heritage Fun: Green Recovery Challenge – A collaboration between the British Ecological Society, MammalWeb, SMASH-UK CIC / Middlesex University and Durham University



As a result of the project's activities, 100% of teachers agreed that their students' connection to nature and knowledge of UK wildlife has improved, and 76% of teachers agreed that their students' well-being improved while participating in the project.

Launched in January 2022, the 'Connecting schools to nature in North-East England' project worked with 72 schools and early-career ecologists across the North-East to help inspire both teachers and pupils to engage with the natural world and transform their school grounds into wildlife-friendly havens. The response from schools and volunteers was fantastic! We reached over 5,000 pupils across the mammals, invertebrates and birds modules, through a combination of outdoor workshops, teacher training events, and the delivery of our exciting new digital platform "BES Encounters".

"This [project] has changed the way our children look after our environment. They are excited

to learn and to know more about the natural world. The equipment has been amazing to use and has enhanced our daily teaching."

This project was funded by a £248,700 grant provided by the Government's Green Recovery Challenge Fund. The fund was delivered by The National Lottery Heritage Fund in partnership with Natural England and the Environment Agency.

An integral part of the project was that ecologists, teachers, and pupils were involved in the design as well as the delivery of the project. The innovative codesign aspect was led by SMASH-UK and Middlesex University. Wyn Griffiths (co-founder of SMASH-UK and Senior



Lecturer in Design Engineering and Mathematics at MDX) said “Our co-production principle of ‘in the community, with the community, by the community’ will ensure our audiences are heard throughout the design of our resources”.

The co-design approach embedded through the process helped to define, develop and refine the strategy, content and delivery of the project. A notable outcome was that it identified a key issue with the variable size and composition of school grounds amongst the participating schools. With the iterative process of co-design driving development, this meant that upon identification, we were able to work with the schools, and to bring in Middlesex University Product Design and Product Design Engineering final year undergraduate

students to join the design teams and explore and develop proposals for low cost, upcycled artefacts and systems that would support green transformations of the various types of grounds, across various levels of access to human and financial resource. This work stimulated creative conversations across all the project participants and helped to build a new final module for the project – the Green Transformations module.

Reflecting on Green

Transformations: <https://www.britishecologicalsociety.org/connecting-schools-to-nature-lessons-learnt/>

In the UK, school grounds differ greatly in the size and quality of habitats available for wildlife. Whilst some schools in our project had vast open green spaces with several different habitats, other schools

had only small, concreted areas enclosed by buildings or fencing.

The aim of our project was to help pupils and teachers connect with the nature on their doorstep, but if the nature on their doorstep is limited, does this mean that some schools miss out? In our project, differences in school ground habitats did lead to differences in species encountered when schools participated in various activities. To keep the more species-poor schools engaged in the project, we re-shaped our key messaging, choosing to focus not on the lack of species present but instead on how we could use this knowledge to make changes for the future.

This is why in our final module of the project we focused heavily on green transformations of school grounds. If a

school was lacking in mammals, we encouraged schools to put holes in fences to attract hedgehogs and other mammals to pass through. Bug hunt didn't reveal much? Schools applied for funding to make planters for wildflowers. We allowed each school to plan and apply for funding for their own individual green transformations. This ensured that the changes made were suitable for their school – to attract wildlife that might currently be missing and to fit spaces that are available.

We loved seeing the ideas that schools produced, and it was a privilege to be able to work with schools to make those changes happen! With the equipment provided by the project (e.g., camera traps and insect surveying equipment) schools can now track whether the changes to their grounds have helped encourage more biodiversity.

Project Summary:

The 'Connecting Schools to Nature in North-East England' project at a glance:

+ Teachers and pupils became citizen scientists through contributing ecological data to national monitoring schemes. Over 1500 camera trap image sequences were uploaded to partner organisation Mammal-Web's online platform as part of the project.

+ The project has provided ecology training through delivering workshops across the partner schools to directly upskill 79 teachers and 65 volunteer environmental educators. With over half of the teachers involved reporting that they enjoy their day-to-day teaching more and feel their wellbeing has improved.

+ Eight new jobs were created to support the planning and delivery of this project.

+ Over £49k has been spent on outdoor equipment and learning materials, with participating schools offered up to £400 in funding to purchase items they needed for their own green transformations – including outdoor clothes for the pupils, landscaping and pond design, gardening equipment, planters, outdoor seating/classroom materials, and wildlife survey kit (e.g. hedgehog homes, bird table/baths, microscopes).

+ Expanding the project outside of just the North-East, the British Ecological Society is now encouraging schools and teachers across the country to get involved, with the official launch of our new digital platform, BES Encounters, a place for pupils and teachers to log their achievements, and access over 100 environmental learning resources.

<https://www.britishecologicalsociety.org/learning-and-resources/connecting-schools-to-nature/end-of-project-summary/>

The project, undertaken in collaboration with citizen science organization Mammal-Web and engagement charity SMASH-UK, encouraged participating schools to open their doors to nature through wildlife-friendly activities such as creating wildflower meadows and installing camera traps which let the children discover the wildlife in their schools.

As a result of the project's activities, 100% of teachers agreed that their students' connection to nature and knowledge of UK wildlife has improved, and 76% of teachers agreed that their students'

well-being improved while participating in the project. Data collected from the pupils via questionnaires also revealed that following participation pupils had a higher connection to nature score and were able to correctly identify more UK species.

Speaking at the celebratory event, Rebecca Aspinall, a teacher from Nettlesworth school said: "Our children now have the skills they need to truly appreciate and engage with their environment. "The connecting schools to nature in North East England project has encouraged the children to stop and look at what's around them in their environment and school grounds. Pupils have been encouraged to think not only about nature already present in the school grounds, but the opportunities for nature that could be there too."

Check out the full project reflection video here: <https://youtu.be/XrVXLRZzEb8>

CLIMATE CRISIS - WILDFIRE!

SMASHfestUK is a collaborative ecosystem researching and developing new approaches in co-design and public engagement with communities underserved by STEM and Arts informal education and under-represented in STEM and Arts education and careers



SMASHfestUK (SMASH-UK CIC) was founded in partnership with Middlesex University in 2013. The organisation is the community based focal point of a collaborative eco-system researching and developing new approaches in co-design and public engagement with communities under-served by STEM and Arts informal education and under-represented in STEM and Arts education and careers.

It works with many partners in different manifestations of its missions, such as the 'Connecting Schools to Nature in the North East' (see pp.60-62) alongside the recent 'LMS Gene Home' at Westfield Shepherd's Bush during October half-term.

The core collaborative project stream for SMASH-UK has been led by Middlesex University staff and students over the full period. The projects have evolved over the decade through the SMASH foundational practice bases of Participatory Action Research and Co-Design/Co-Production led by Wyn Griffiths. The early projects focussed on multiple events, including both drop-in and ticketed activities (such as plays, arts, crafts, comedy, interactive installations, games and exhibits), all linked by an overarching storyline of a fictional natural disaster set in the locale. Audiences are always invited to help 'save the world' from these existential threats, putting them at the centre of the experience as people who have (or who can

develop) agency to change the outcome of the disaster, and therefore change the future through science and arts-based interventions.

Over time, a wide range of engagement methods have been explored over iterative festivals, developing methods and mechanisms for deep engagement and providing opportunities to explore aspects of representation, community-context and complex interactions with STEM and society in meaningful frameworks. Theatre, narratives and, increasingly, immersive interactive experiences emerged as key drivers for inclusive engagement with evaluation results suggesting that the deeper the immersion

Visit SMASHfestUK
www.smash-uk.org.uk



MDXPD Final Year BA Product Design and BEng Product Design Engineering students, with graduate intern at SMASH, Navpreet Singh, on site visit to partner Lewisham Youth Theatre, to survey venue.

in the storyline the greater the engagement of the audience. As the level of interaction and the personal agency within the production increased, so the science identity of the audience was built or reinforced. The latest iteration and refinement of this approach, following the success of 'Space Plague' (see MDXPD Magazine 2021) is **Climate Crisis – WILDFIRE!** An inclusive immersive experience design & production programme for positive social transformation.

Initiated in 2021, and continuing through public performances, research programmes into 2024, the project aims to empower young people & families from communities underserved by STEM & Arts informal education and underrepresented in STEM

& Arts education and careers to take creative action and assume creative leadership in tackling the climate crisis.

Developed as a new concept, based on SMASH-UK CIC and Middlesex University research – a LiVE Adventure (Live Interactive Immersive Virtual/physical Environment) > Real science & engineering in a compelling immersive hyperlocal story game with live in character problem solving & complex decision-making by public participants.

A mix of immersive theatre, escape room, simulation environment, live action role playing & collaborative gaming. Co-designed and co-produced 'in the community, with the

community, by the community'.

The WILDFIRE! adventure is designed as a fully immersive experience and public runs have been in a dedicated single room and corridor 'set'. This immersed and isolated participants fully within the story and the conceit that they were in a Fire and rescue Research and Engineering Facility for training as members of a local Fire and Rescue Citizen's Advisory Panel. As the adventure progresses, it becomes apparent that a real fire emergency is happening, and the trainees have to respond to save London...

Climate Crisis – WILDFIRE! programme and public shows: A collaborative co-design & co-production programme

focusing on live 'prototyping' cycles brought together climate scientists, engineers, fire & rescue professionals, designers, writers, directors, actors & producers through lead & main partners: Middlesex University, SMASH_UK (SMASHfestUK) in partnership with Copper Candle, Lewisham Youth Theatre, Phoenix Community Housing With funding from the Royal Academy of Engineering & British Science Association (UKSFN).

Climate Crisis – WILDFIRE! is based on a decade of development of models and methods for achieving the transformative effects in informal learning environments. The approach is underpinned by a co-design/ co-production approach developed by Wyn Griffiths and Lindsay Keith and a model 'SCENE' for developing meaningful and impactful public engagement.

The project is on its seventh cycle. The cycles of prototyping, testing & iteration:

1. Pre-brief development.
2. Public co-design for key insights, general focus & narrative development.
3. Development of digital component MVP & live testing.
4. Community partner co-design & co-production of live shows (with next cycle feedback input from participating audiences).
5. Middlesex University student & staff & Copper Candle creative synthesis of Cycle 1-4 learnings into 'final' experience.
6. Community co-design & co-production of participatory art installation response to the 'final' experience.

7. Development of compact version, for a single team, in a non-ideal environment, tested and co-designed with audiences and MDXPD graduates - Abdulaziz Mohamud, Jerusa Da Silva, Navpreet Singh and Tom Millward - at NS Live 2023. The graduate team are being funded by the British Science Association/UK Science Festivals Network 'Making Connections' programme to develop their theoretical knowledge base, skills and experience in Participatory Action Research, Co-Design & Co-Production and Experience Design for Social Good.

Impact:

+ 630 people participated in the programme – 538 as active audience participants & co-design contributors, 92 as co-design & co-production teams.

+ 100% of participants were positive about the experience.

+ 49% had never been to a STEAM event before - new audiences.

+ All events were fully representative of the host communities.

+ 78% 'felt like an engineer' during & after the event – confirming transformation of identity through immersive experiences/narrative transportation).

Co-design and production teams participants reported positive learning and experience, such as: Navpreet Kaur Singh – MDX Graduate & Product Design Engineer, "Working on WILDFIRE has been a great collaborative & co-designing experience. I have learnt a lot about working with different community groups to support their ideas & creativity. Joining the groups weekly sessions is gratifying as you build a

relationship with the people you are working with and get to have a better understanding of their insights and how they view the world as you develop your own practice. The project is an MDX/SMASH climate themed event that will build discussion and hope around the community and that aims to empower communities to build a stronger connection to their STEAM identity and learn more about future climate challenges we may face. Preparation is highly valuable. This project has helped me and the community to think about how the current public service systems in place would react if there was a WILDFIRE disaster to occur in our localities. It has also given us an idea of how communities could organise to reduce the negative impacts of a local wildfire."

VIEW the Climate Crisis – WILDFIRE! Visual Process Diary: <https://flic.kr/s/aHBqjA7P6d>

READ SMASH_UK publications and pertinent research: Journal of Science Communication paper for details - "'Space Plague': an investigation into immersive theatre and narrative transportation effects in informal pandemic science education'

Research for All. Vol. 5(2):320-346. Lindsay Keith and Wyn Griffiths. SCENE: A novel model for engaging underserved and under-represented audiences in informal science learning activities.

Journal of Science Communication – 'Communities and narratives in neglected spaces: voices from SMASHfestUK'

'Science & Theatre: Communicating Science and Technology with Performing Arts' Griffiths, W. and Keith, L. (2022), "Actors with Agency: Immersive Science Theatre and Science Identity", Emerald Publishing Limited, Bingley, pp. 103-112.

GLOBE OF DISLOCATION

To celebrate 10 years since the **Globe of Dislocation** formed the entryway into 'Longitude Punk'd' – which took over **The Royal Observatory, Greenwich**, it has been refurbished and installed at the Hendon Campus. Middlesex University Academic, Wyn Griffiths discusses the design, manufacture and exhibition.



To celebrate 10 years since the **Globe of Dislocation** formed the entryway into 'Longitude Punk'd' – which took over The Royal Observatory from April 2014 until January 2015 – we've refurbished and installed it at one end of the Hendon Campus, MDX Pavilion. There are strong connections between the two through the intent, process and the visual and conceptual resonances. While their story and manifestation derive from very different contexts and pathways, the underpinning commonalities celebrate key aspects of our MDX research and education priorities and drivers from the UN Sustainability Goals.

The work on the design, development & manufacture was by a team from Middlesex University, which captured the transdisciplinary and

collaborative approach of those staff and students. The approach exemplified their practice-based learning & research - experimenting with methods for illuminating complex socio-technological concepts through narrative-led experiences & exploring possibilities for accessible mass public engagement with STEM, the Arts & Humanities. The opportunity for current MDXPD/E students and graduates to work on high-profile live projects was, and is central to the course philosophy. Framing this type of opportunity in projects that stretch the student participants' experience of '*what design is, and for?*' is an important developmental pathway in the curriculum.

'The Globe of Dislocation' is largely made up of re-purposed and up-cycled materials. This included components from trains,

cars, garden machinery, pumps, door knobs, as well as scaffolding poles, a toilet ball & timber from jewellery desks. We "imagined the project from a perspective of Enlightenment values - bringing science, technology and art together -distorted through a lens of fantastical 'imaginary engineering', to create an intriguing user experience that would stimulate visitors to explore the real stories of, and approaches to, innovation and the real technologies of the time."

The exhibition was a great success, with a total audience of 282,795 paying visitors. Each entered the 'story-world' and the physical exhibition through the Royal Observatory Courtyard, where this installation represented the start & end of their journey & 'opened the wormhole' into the experience. We open the

'wormhole' here again, 10 years on, to celebrate that anniversary and to continue the public conversation where we try "to distinguish fact from fiction, we look again, and we look closer."

The Background:

In 2014 a group of artists, designers and writers took over the Royal Observatory Greenwich for 10 months, flipping it into a fictional version of itself - creating 'Longitude Punk'd'. The whole venue became an immersive experience, inviting visitors into a counterfactual mix of fiction and reality, blurring the boundaries between art and science / fact and fiction, with fantastical inventions alongside real historic objects. A major exhibition on the history of longitude, 'Ships, Clocks and Stars' at the National Maritime Museum moved some of the key real artefacts for the period of the exhibition. The response from the exhibitions team was to recreate a 'new' version of the Royal Observatory, rather than close it while 'Ships, Clocks and Stars' was showing: "The race to determine longitude at sea, and so to know exactly where you were, gripped Europe during the 18th and 19th centuries, with large rewards offered to anyone who could solve this great problem of navigation in the age of sail. Presenting many of the ingenious methods & instruments designed to scoop the prize & transform seafaring navigation forever, the exhibition brings alive the world-changing story of longitude, exploring the industry & imagination, relationships & rivalries that shaped one of the largest scientific & technical endeavours in history."

This creative response, 'Longitude Punk'd' was inspired by the technical inventions that were presented to the Board of Longitude between 1714 & 1828, celebrating the visionary inventors, star gazing astronomers

and technological developments of that period, through a fictional lens.

The 'Globe of Dislocation', shown here in the MDX Pavilion, was conceived by Yomi Ayeni & Wyn Griffiths during collaborative workshops as the central mechanical artefact & story element: the crashed navigational hub of 'Prime Landing', a fictional time-travelling airship built by Astronomer Royal of that time, Nevil Maskelyne, which disappeared into its own 'wormhole' disintegrating and crashing onto the Prime Meridian upon re-entry. The accompanying 'Prime Landing' exhibition elements and video installation detailed Maskelyne fevered dreams, design developments and resolution into the airship and navigation hub.

The Exhibition:

Standing in the Meridian Courtyard and opening the door to the alternate realities of Longitude Punk'd is 'The Globe of Dislocation'; all that remains from the crash of time-travelling airship 'The Prime Landing', devised to navigate between alternate universes. From there, visitors step inside the Sir Christopher Wren-designed Flamsteed House, & discover the captivating array of steampunk curiosities displayed throughout its grand, historic surroundings as guided by The Commodore – a character created by renowned novelist Robert Rankin. On display were opulent and ornate apparel inspired by the night sky including gowns, headdresses, and a reimagining of Astronomer Royal Nevil Maskelyne's noted silk observing suit; outlandish contraptions purporting to solve the longitude problem; and fanciful submissions and whimsical illustrations presented to the Board of Longitude."

The exhibition and the 'Globe of Dislocation' functioned on various

levels – as a counterfactual lens through which to view the real history and technological developments exhibited in the Royal Observatory; as a story adventure to transport and immerse visitors within an experience aiming to enable curiosity, joy, & reflection; as an exemplar of creative upcycling & repurposing of materials within the main story artefact to illuminate sustainability – linking to the creative 'repurposing' of that whole Courtyard & Flamsteed House section of the Royal Observatory for 'Longitude Punk'd'. These layers & lenses all supported the meta-mission of transforming the Royal Observatory into a narrative-led fictional version of itself that would encourage visitors to approach the content with a mindset of "trying to distinguish fact from fiction, we look again, and we look closer. And such inspection, evaluation and scrutiny are surely what science and history are all about."

Design, Engineering and Manufacture by Middlesex University staff: Wyn Griffiths, Neil Melton, Colin Moss, Ahmed Patel. With support from MDXPD Product Design and Engineering students and graduates: Harry Bradshaw, Zed Callaghan, Tremayne Gilling, Curtis John, John Regan, Alek Thomas, Victor Toh and Chris Whellams.

Longitude Punk'd was commissioned & managed by The National Maritime Museum, The Royal Observatory Greenwich and inspired by the technical inventions that were presented to the Board of Longitude between 1714 & 1828.

READ MORE ABOUT THE MDX PAVILLION:

mdx.ac.uk/news/2019/08/mdx-pavilion-is-completed

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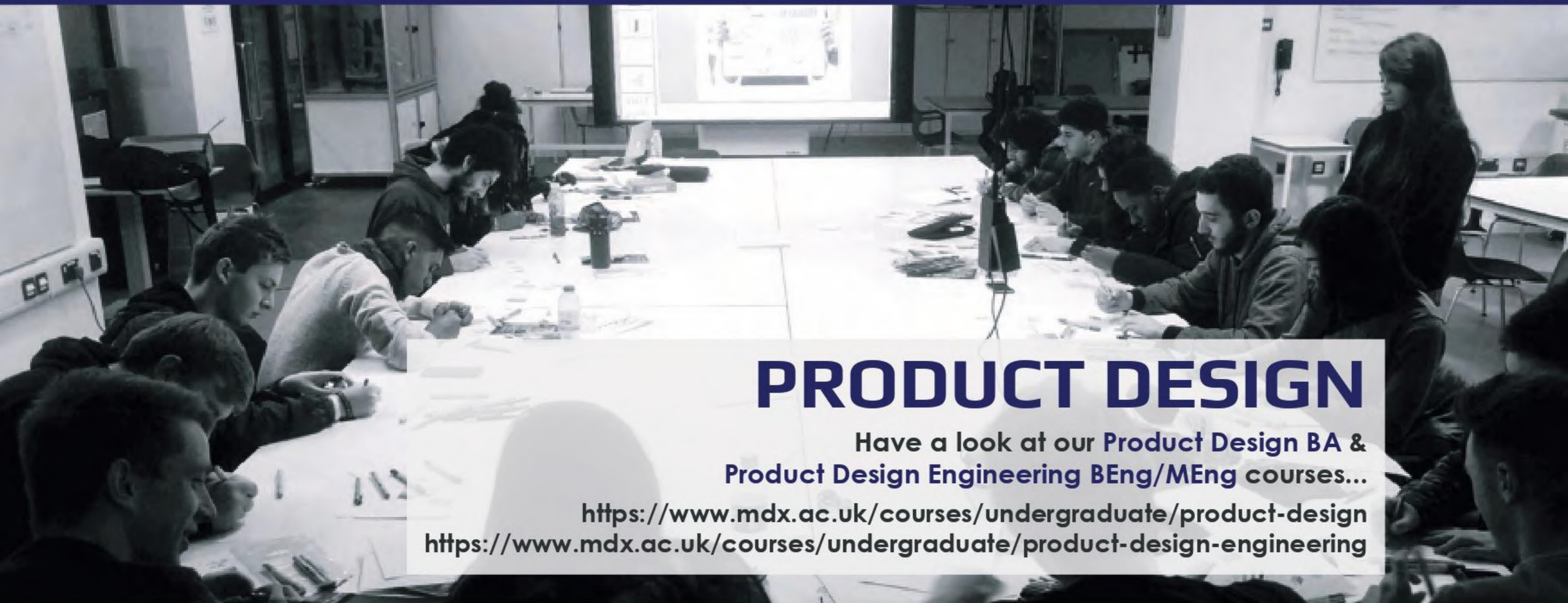
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OUR NEXT OPEN DAY
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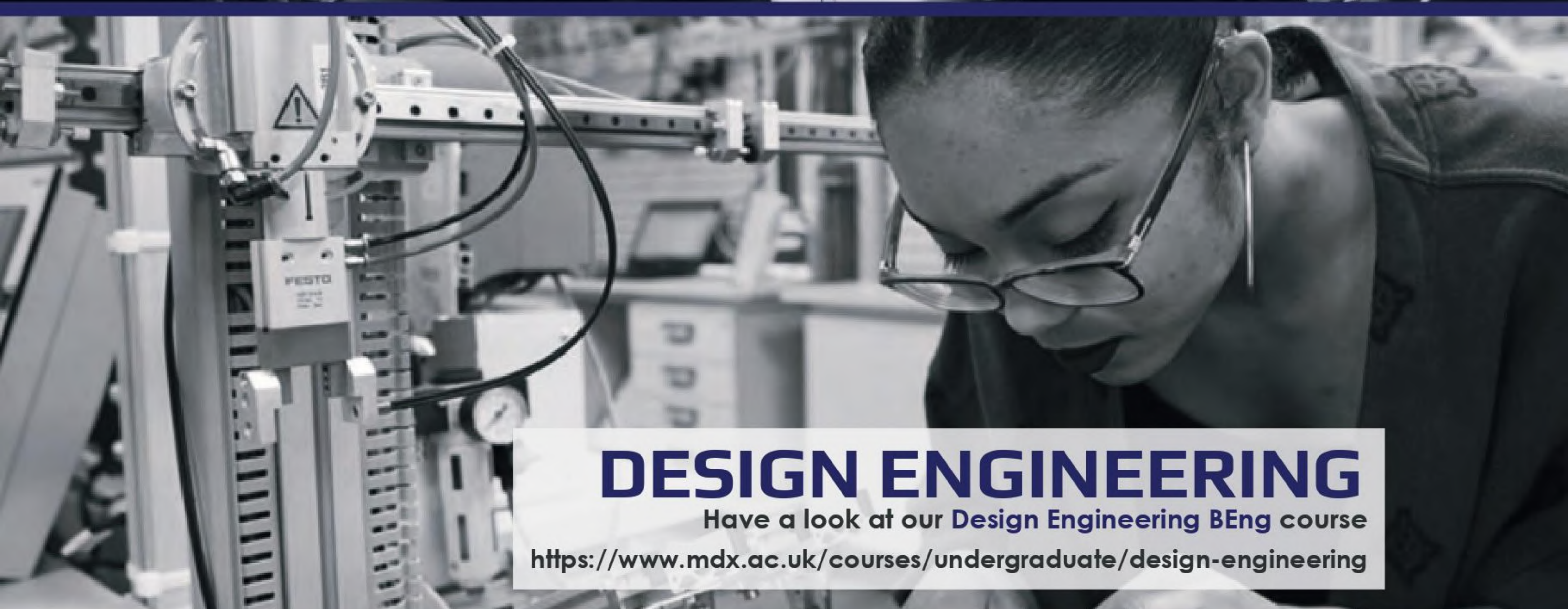
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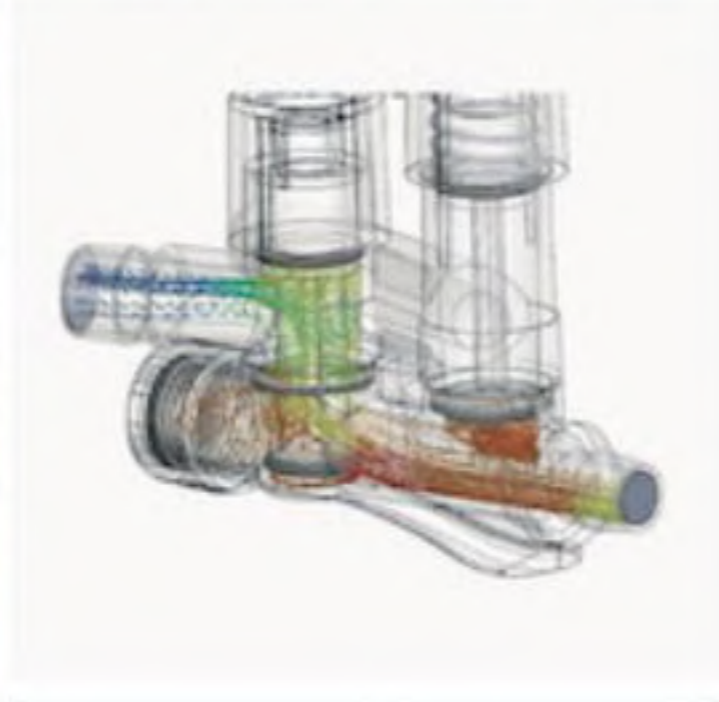
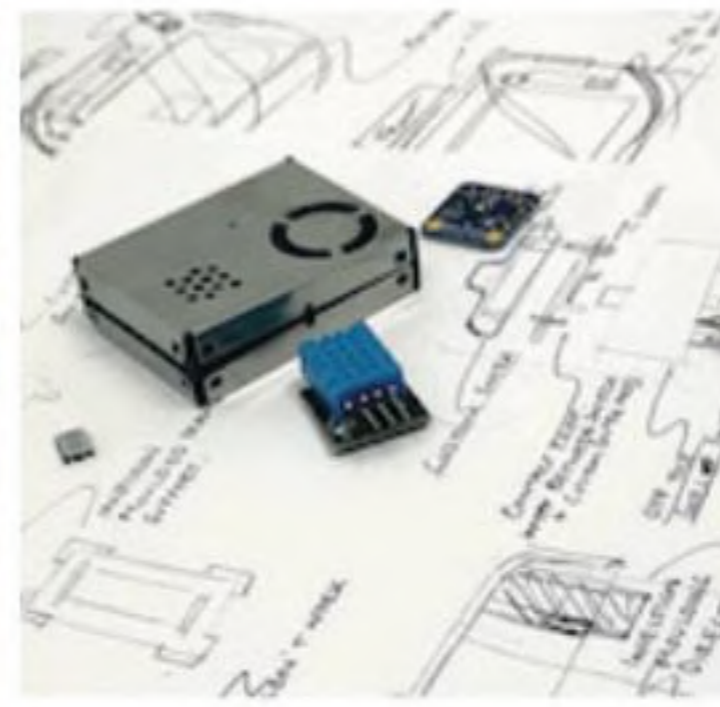
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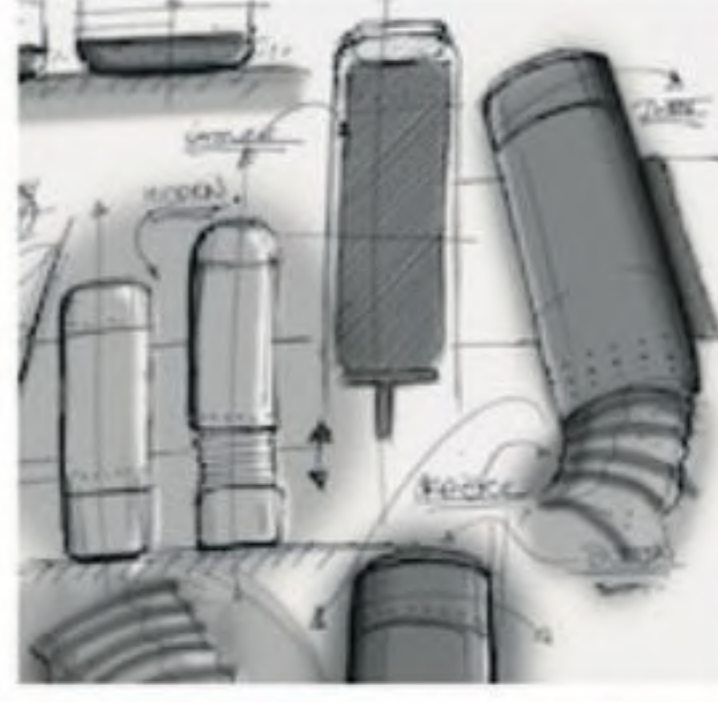
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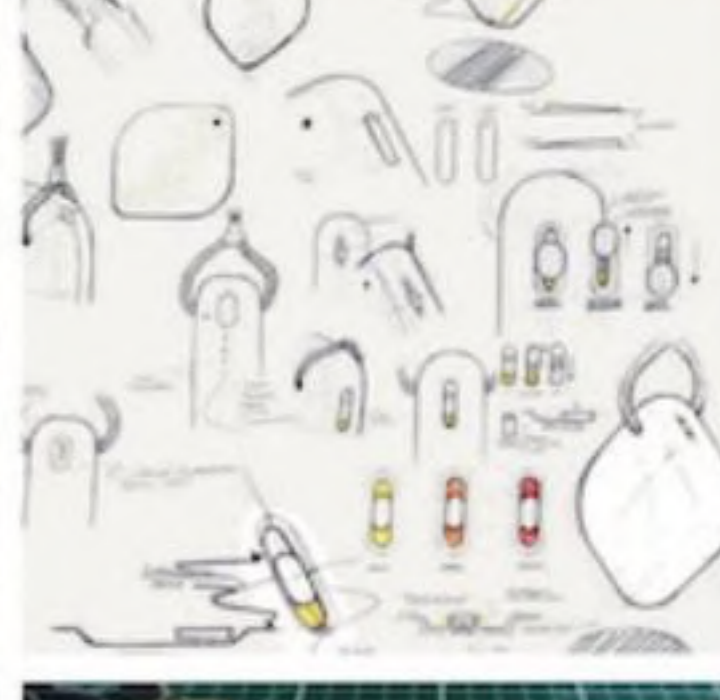
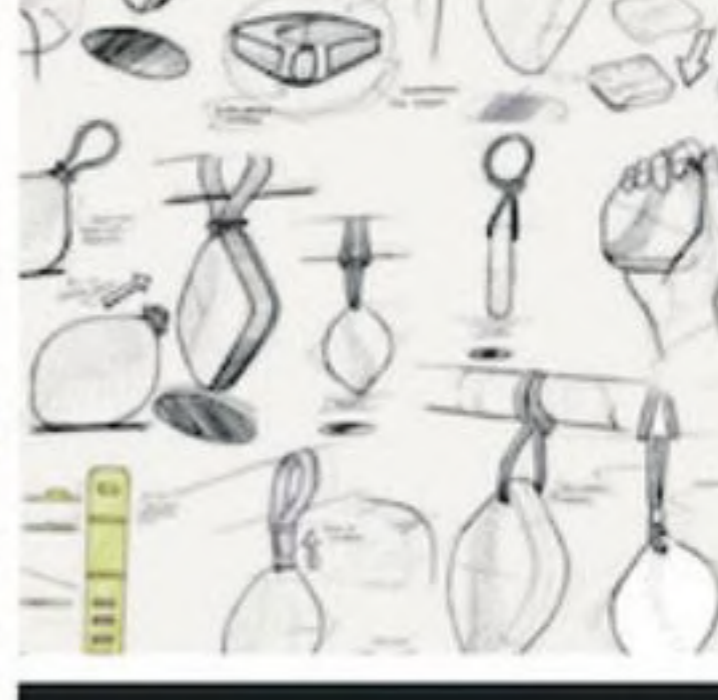
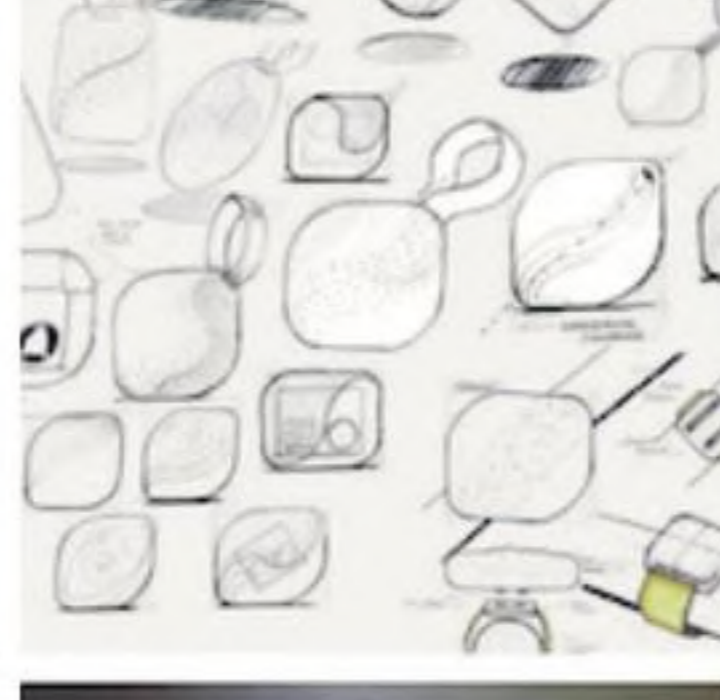
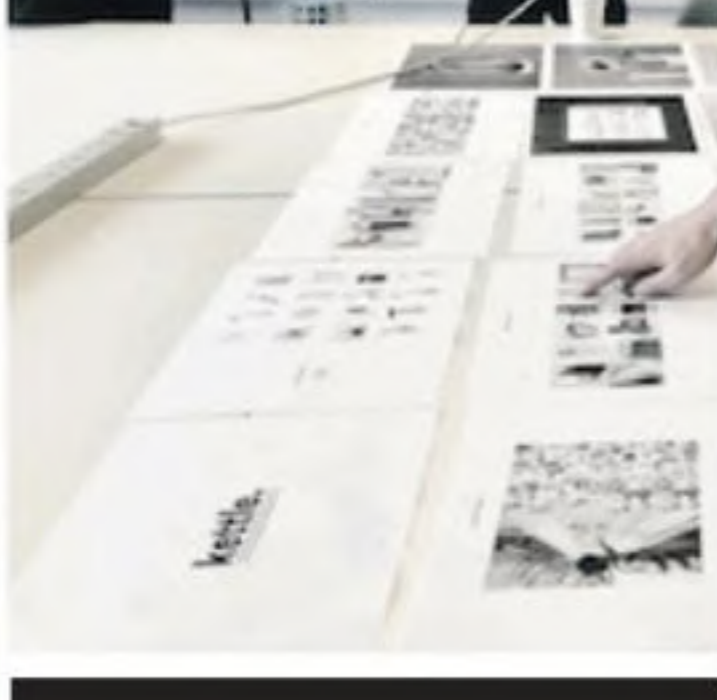
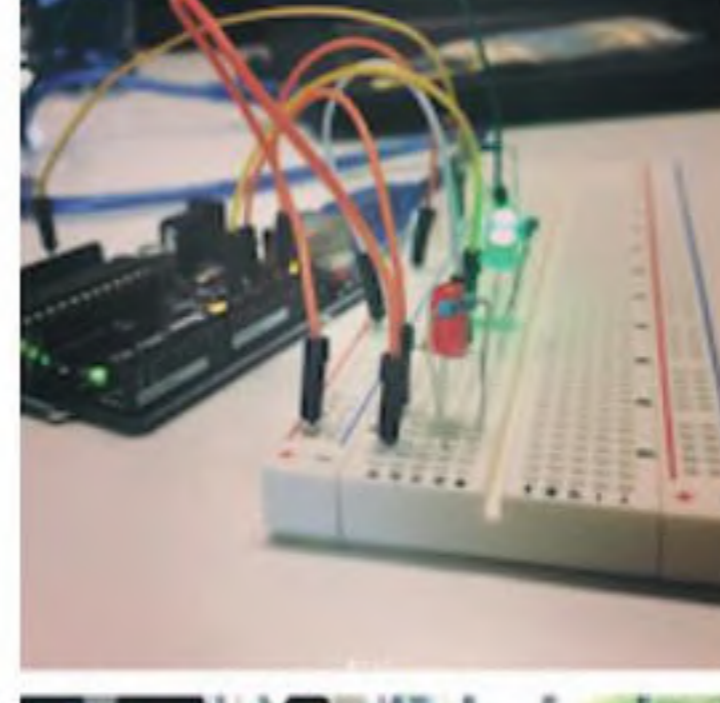
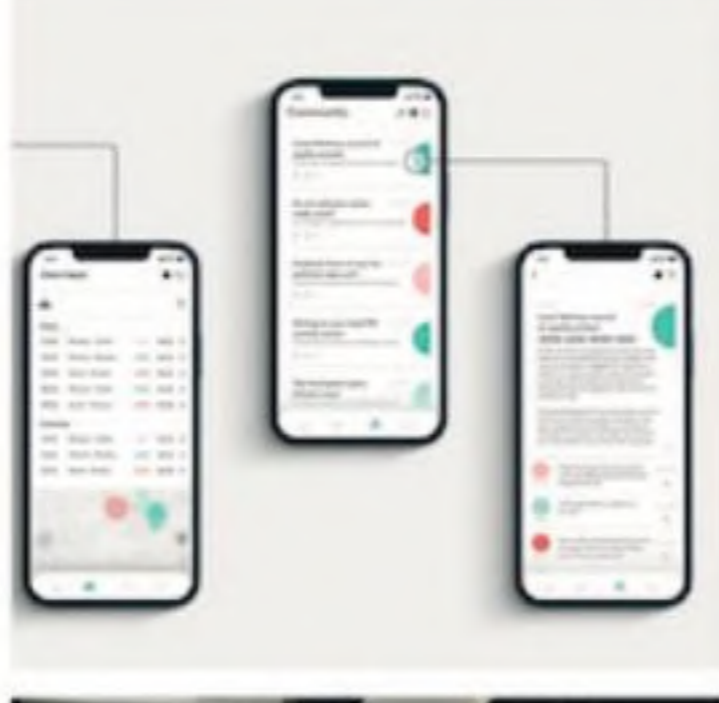


PLAY
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Service
System
Experience

Prototype
Tangible
Intangible



Practice
Action
Knowledge



Collaboration
Process
Conversation



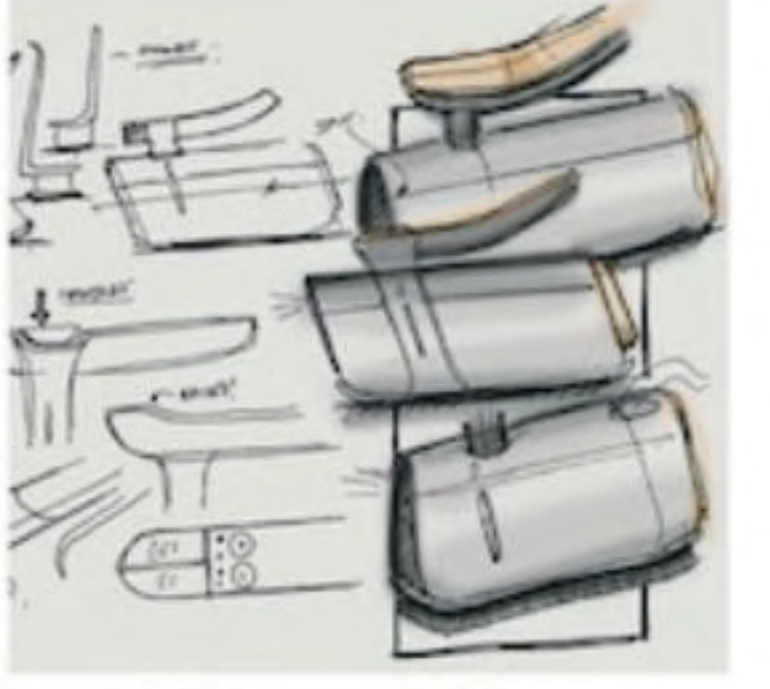
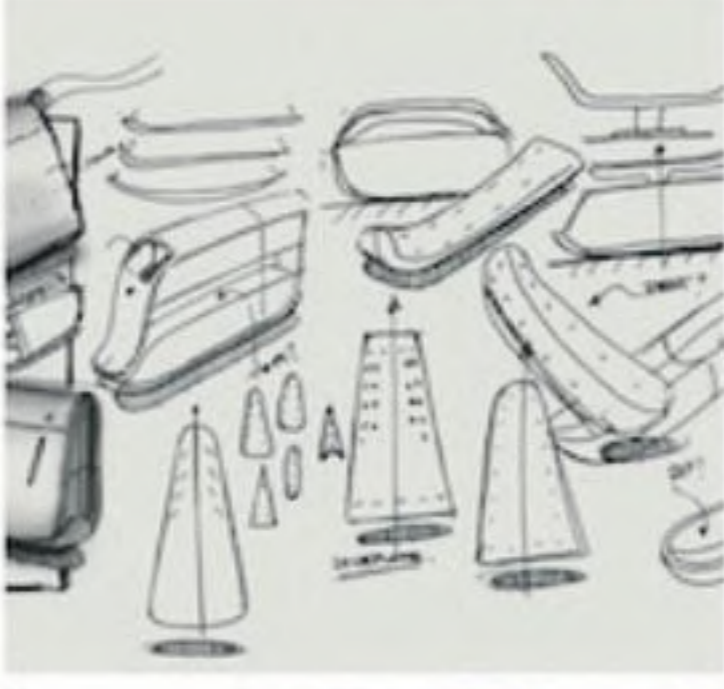
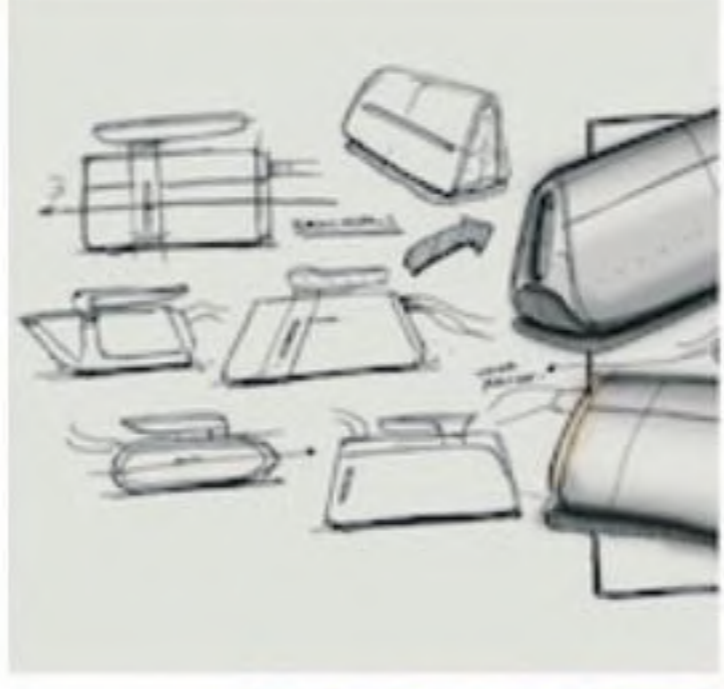
Social Change
Climate Crisis
Sustainability



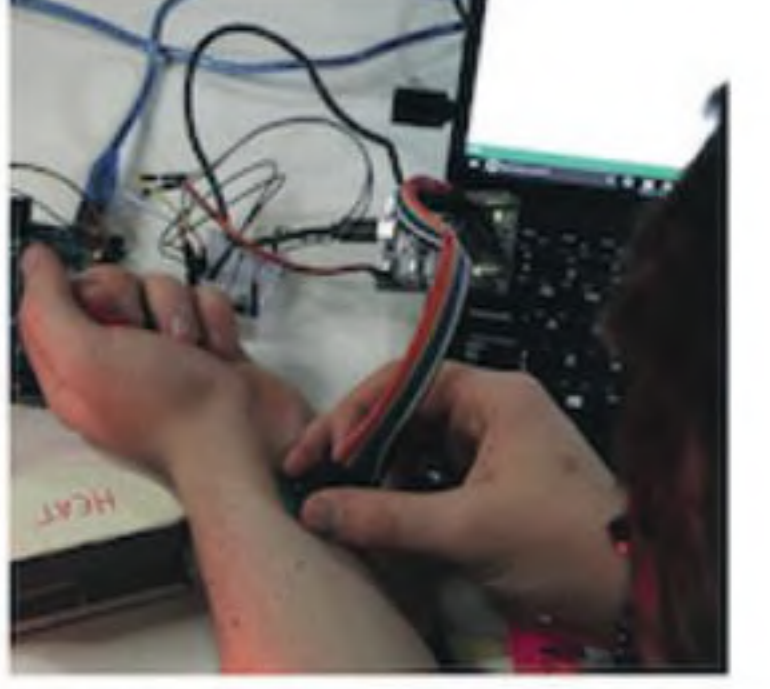
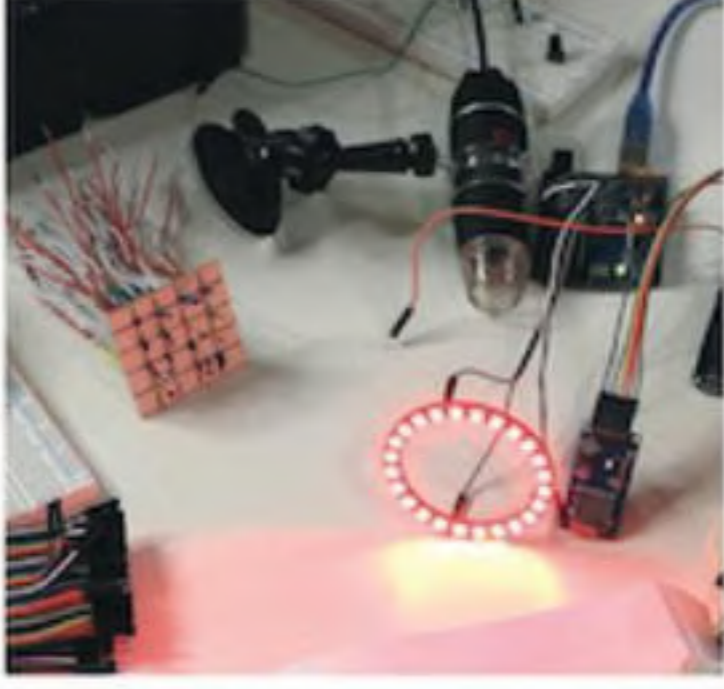


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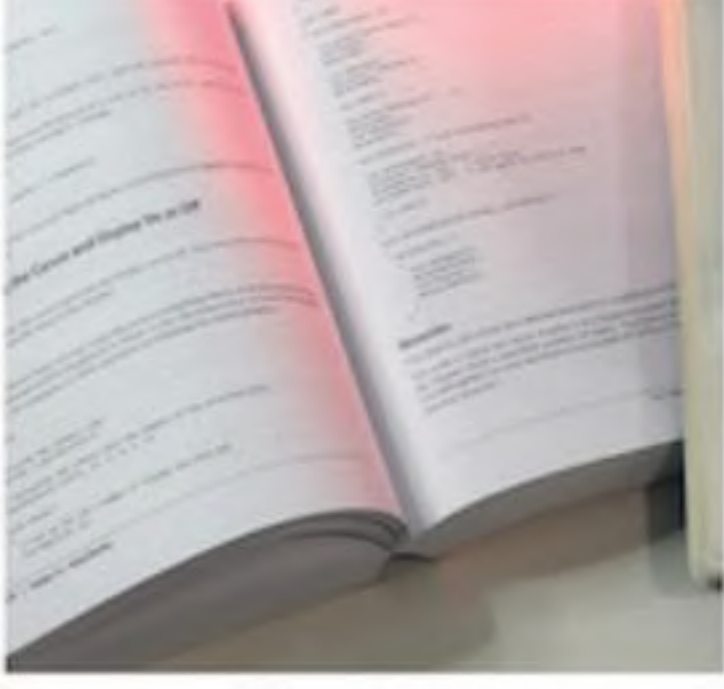
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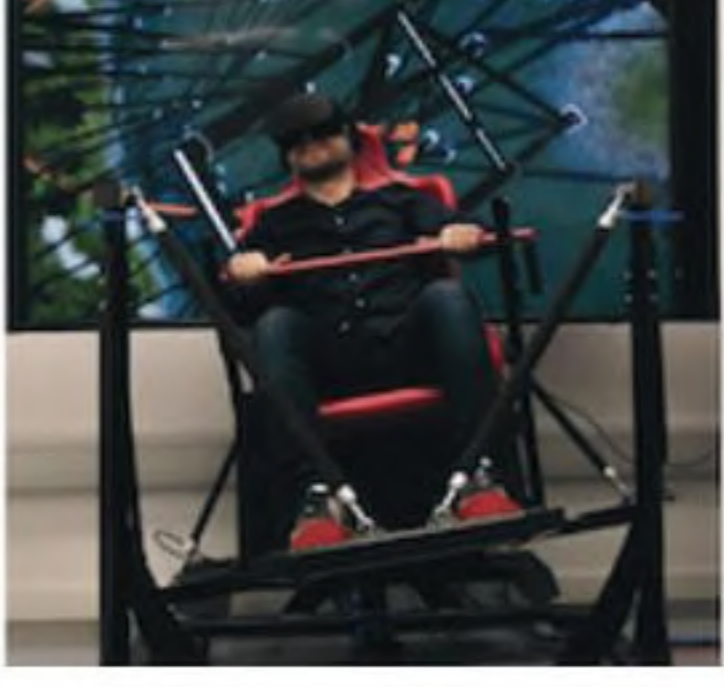
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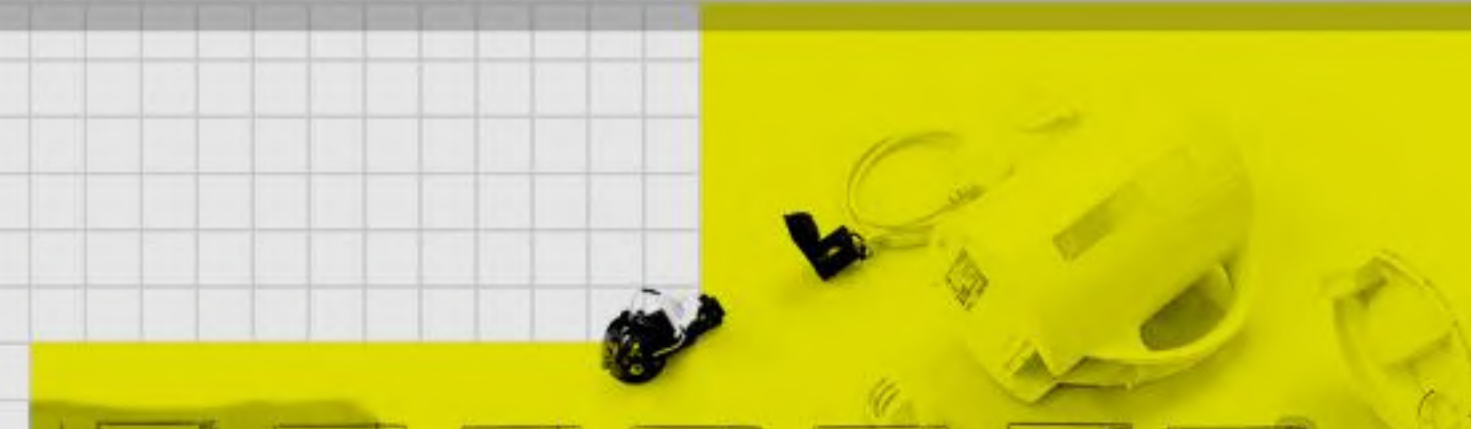
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