

Rowan Dixon

Designer and Engineer

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Education

2016 - 2020 **Design Engineering MEng - Imperial College London (2:1)**

A new course at Imperial and the RCA which has a heavy focus on project work with an even split between group and individual projects, fusing engineering and design thinking.

Modules Covered – Design, Mechanics, Electronics, Energy, Computing, Production and Materials, Computer Aided Engineering, Engineering Design, Engineering Mathematics, Audio Engineering, Enterprise Roll Out, Sensing and IoT and Solo Research Project.

Key Projects

2020 **BLINK - Wireless Indicators for Bicycles**

After witnessing numerous accidents at roundabouts on my daily cycle commute, I developed an indicator system which takes inspiration from the positioning of motorcycle indicators. The brake light and indicators automatically activate, meaning the cyclist can keep their hands on the handlebars and brakes at all times.

2019 **ZoomBot**

ZoomBot is a portable device which was designed to augment video conferencing. It used an array of 5 directional microphones to analyse who in the room was speaking and could then point the attached device in their direction. It was designed to be cost effective, thus used individuals work devices, such as phones, for their screen and camera. This also meant the users could choose which software they wanted to use rather than being locked into a specific service which is quite common with other hardware.

2018 **BEAT - Mechatronics**

An interactive mechanical heart which changes its BPM relative to the user, providing an elegant way to visualise your heart beat. It utilises a system of cams and pistons all actuated by a stepper motor controlled by an Arduino. The project is currently being exhibited at CISCO in London.

Responsibilities

2019 - 2020 **Chair of Design Engineering Society - Imperial**

Manage a team of 13 to organise academic and social events for 500 members of the society and help direct the future development of the society.

2016 - Present **Expedition Leader**

I have led and organised expeditions to remote parts of the world, including crossing the Sahara desert twice and a 3 week mountaineering expedition to the Alps summiting 5 peaks.

Employment

2020 **Microsoft - Design Engineer Intern**

As part of Microsoft Research, I helped explore and develop an innovative way of wirelessly charging devices. The project used a custom designed sensing layer to determine where the device was located and used nitinol actuators to move the transmitting coil to the correct location. The system was designed to be built into surfaces such as desks to create a truly wireless charging solution which didn't have cabling trailing over a surface.

2019 **Coutts - Product Hardware Design**

- Designed, prototyped and built a hardware solution for international video conference calls.
- Designed and developed a web portal for mortgage brokers to interact with the bank, streamlining the current process.

About me

I am a product designer and engineer working on physical products and interaction design. I prototype and create applications for emerging technologies through a blend of engineering practice and design thinking.

Skills

Hardware:

Prototyping, CAD, FEA, 3D printing, Mechanics, Design for manufacture.

Electronics:

PID controllers, Robotics, PCB design.

Software:

SolidWorks, Fusion 360, Python, C++, Adobe suite (Id, Ai, Xd), Excel, Keyshot.

Extra Curricular

Awards:

2019 - P&G Product Innovation Award

2018 - Grantham Institute Sustainable Water Bottle Design and Brand

2018 - Dyson School of Design Engineering - Finalist

2014 - RAF Flying scholarship

2013 - RAF Gliding scholarship

Sports:

Imperial Mountaineering Society

Climbing

Trail Running/Ultra marathons

Ski Racing (2x National Champion)

Triathlon

Volunteering:

Contributor to University Newspaper

Young Scout Leader

CCF Young Officer

Youth Ski Instructor

Additional Work Experience

2018 **Formaplex - Engineer**

Designed and built devices and tools for use on a manual production line.

2017-19 **Tutor**

A level/GCSE physics, maths & chemistry

2017 **University Bar tender**

Working in the bar alongside my degree helped me develop my time management skills

2015 **Lab Technician - Phasix**

Tested integrated chips for resistance to electrostatic discharge.

References available upon request