

SUMMARY

Interdisciplinary design engineer, skilled at developing hardware/software product systems from problem to fruition. Penultimate year MEng undergraduate student, at Imperial College London, Dyson School of Design Engineering.

EDUCATION

Imperial College London, Dyson School of [Design Engineering](#) | MEng 3rd year undergrad. 2018-2022

- Achieved a 1st in all modules years 1&2 (**avg. 77%**) and in the **top 10% of the cohort**.
- Relevant modules: Computer Science, Gizmo (mechatronics), Design, Electronics, Mechanics, Mathematics, Robotics, Innovation & Entrepreneurship CAD & FEA, Communication with Design, Thermodynamics, Big Data, Optimisation.
- Example project - [Nova](#) | Engineering Design Project:
 - Group project creating a robot aimed at increasing engagement with learning to code. Achieved by linking a web based code editor & tutorials, to the physical input/output of a robot.
 - The physical device packaged electronics (Raspberry Pi based) including battery and charging circuits into a compact sub-assembly considering design for manufacture and assembly.
 - Django web app with MySQL database for teaching and remotely sending code to the fully working prototype.
 - Designed and created PyQt5 touchscreen UI, and Python backend.
- Extra-Curricular Horizons Entrepreneurship course | Pass with merit

King's School Worcester | Captain of Rowing, King's Scholar, Monitor. 2011-2018

- A-levels (2018) | 4 A*s in Physics, Mathematics, Further Mathematics, Chemistry
- Level 3 (2017) | A* Extended Project (EPQ) 'How will 3D printing affect the medical industry in the next decade?'
- GCSEs (2016) | A** (A⁺) Further Mathematics | 11 A*s incl. D&T, Latin, German.

EMPLOYMENT & EXPERIENCE

Deana Consultants | Director / Design Engineer February 2020-Present

- Following success at hackathon, working with **LEON Restaurants** to further develop IoT smart store concept.
- [DEANA Consultants Ltd.](#) (no. 12594475) was founded by myself and the members of the hackathon team.

Ideas Lab | Full-stack Developer July 2020-September 2020

- Asked to develop software and hardware for IoT enabled makerspace at Imperial College London - supported by Autodesk.
- Self taught JavaScript and Built React frontend UI & Node backend with MongoDB for controlling the space.
- Integrated APIs and created local REST API. Created ESP32 ID-card readers and used MQTT to control smart plugs.
- Worked in agile dev team conducting daily stand-ups and using Bitbucket (git) & Jira to manage workflow.
- Project presented at Uni. of Sheffield 'UNIMAKER' Academic Makerspace Conference 2020 and soon will be open source.
- [The outcome](#) was extremely rewarding - now supporting over 500 society member's projects.

Fire Tech Camp | Tutor July 2019-September 2019

- Taught Arduino, VEX IQ robotics, videography and digital design to groups of 9-17 year olds in week long summer camps.
- Gained experience of conveying technical knowledge in easy to understand way and of working in a team environment.

Honeywell Hymatic | Work Shadowing July 2017

- Experienced all departments of a large engineering company and sat in meetings with international clients.
- Learnt NX CAD package then worked with engineering drawings to create and pressure test a Stirling engine part.

TECHNICAL SKILLS

Code Python, PyQt5, Django, C, JavaScript, React, Node, REST APIs, HTML, CSS, MySQL, MongoDB, MATLAB, Git

Design System design, DFM, DFA, UX/UI, human-centred design, ethnographic research, graphic design

Software Adobe Suite (Ps, Ai, Id, Lr, Ae, Pr, Xd), Solidworks (incl. visualize), Linux environments, Keyshot, MS Office

Prototyping & Workshop 3D printing, laser cutting, metal (lathe, mill) & wood working, prototype electronics

Hardware Raspberry Pi, IoT, Arduino, ESP32, MQTT, mechatronics / robotics

RECENT ACHIEVEMENTS

LEON Hackathon overall event winner with best backend solution for the popular restaurants chain.

Dean's List Years 1 & 2 for being in the top 10% of the cohort of Design Engineering at Imperial College London.

OTHER INTERESTS

Photography, Videography, Cycling, Running.