OLIVER COLEBOURNE

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SUMMARY

Interdisciplinary design engineer, skilled at developing technical products from problem to fruition. Experienced with a large toolkit for both hardware and software prototyping, and always eager to learn and use new technologies. Consistently in the top 10% of the cohort - currently in penultimate year of MEng undergraduate study, 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 **(avg. 77%)** and on the **Dean's List (top 10% of the cohort) for both years 1 & 2**.
- Relevant modules: Computing, Gizmo (mechatronics & robotics), Design, Electronics, Mechanics, Mathematics, CAD and FEA, Communication with Design, Thermodynamics, Big Data
- Example project - Nova | Engineering Design Project:
    - Group project creating - to the point of a high-fidelity, working prototype - a robot aimed at increasing engagement with learning to code. Achieved by linking a web based code editor & tutorials, to the physical output of the robot.
    - The physical device considered design for manufacture (injection moulding) and assembly with a good outcome.
    - Packaged electronics (Raspberry Pi based) including battery and charging circuits into a compact sub-assembly.
    - Created Django based web-app and MySQL database for learning and remotely sending code to the device.
    - Created fully working demo unit with 3D printed components beyond scope of module, despite COVID-19 conditions.
- 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.

EXPERIENCE & EMPLOYMENT

LEON Restaurants | *Design Engineer (contracted as DEANA Consultants)*   *Februrary 2020-Present*

Following our teams success at the DesSoc X LEON hackathon, LEON expressed interest in us further devloping our winning concept - aiming to conduct in-store testing with iterations of prototypes to validate the concept and provide LEON with technical plans for future implementation. LEON is the first client for DEANA Consultants Ltd. (company no. 12594475), founded and directed by myself and the other 3 members of the original hackathon team.

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

Developed software infrastructure for IoT enabled makerspace at Imperial College London, supported by Autodesk. Self-taught and used JS for React, Node & Express with MongoDB & MQTT to create system for: managing credit; controlling 3D printers; restricting machine use by user permissions; and purchasing materials. Integrated external APIs and created local REST API. Experienced working in agile development team conducting daily stand-ups and using tools such as Bitbucket (git), Zeplin & Jira to manage workflow. Project presented at the University of Sheffield 'UNIMAKER' Academic Makerspace Conference 2020 and will be open sourced shortly.

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 elements of a large engineering company. Learnt NX then worked with engineering drawings to create and pressure test a Stirling engine part in CAD. Experienced boardroom meetings with international clients.

TECHNICAL SKILLS

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

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

Software Adobe Suite (Ps, Ai, Id, Lr, Ae, Pr, Xd, Dw), Solidworks (incl. visualize), Keyshot, Microsoft Office

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

Hardware Arduino, Raspberry Pi, IoT, ESP-32, MQTT, robotics/mechatronics

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 MEng Design Engineering at Imperial College London.

OTHER INTERESTS

Photography, Videography, Cycling, Running.