

Experience

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Houghton Design - Design Development Engineer

(Aug 2022 - present)

- Working in a busy design consultancy, taking on large product/medical device design projects from large pharmaceutical companies along with SME's.
- Working across HD's product development workflow; exploring new opportunities, concepting, conducting robust design development, prototype builds, testing and industrialisation.
- Managed and completed multiple industrial design projects for household name brands and large CMOs with fantastic feedback from clients.
- Worked as an engineer in the core team on large electromechanical projects being introduced into production - predominantly for a leading manufacturer/retailer of electromechanical sanitary-ware and a surgical lighting start-up. I have had significant impact in solving engineering problems on multiple additional projects.
- Used SOLIDWORKS to develop full device models and engineering drawings.
- Due to the nature of medical device consultancy I have had to keep up to date with changes in regulations such as EU-MDR, IEC 62366, 60601 & 61010 and worked to both ISO 9001 & 13485 QMS with assistance from colleagues.
- High quality DfM experience gained with Injection Moulding, Sheet Metal, Fabrication and Machining along with DfA experience working with client production departments.

Elusive Parts - Design Engineer

(Mar 2020 - Jan 2021)

- Initially joined on a 6-month placement as part of my MEng degree, transitioned to part-time following resumption of my studies.
- First employee of an early start-up looking to reproduce NLA and hard to find classic car parts using state of the art 3D scanning techniques and 3D printing.
- Oversaw the development of the business, from developing the reverse engineering process to front-end design (website, customer interactions).
- Manufacturing procurement and supplier management, to deliver components to customers.
- Part catalogue contained over 50 rare NLA parts before the decision was made to mothball.

Education

Imperial College London - Design Engineering (MEng)

(2017-2021)

- Graduated with Upper Second Class Honours.
- 30 modules with an emphasis on creativity, development of technological products and group collaboration.
- Modules covering: Human Centred and Industrial Design; Mathematics; Production and Materials; Electronics; Programming; FEA; Biomimetics; Mechatronics; Robotics; Optimisation; IoT; Additive Manufacturing.

St Josephs College Sixth Form - 1A*, 2A, 1B, A-Levels

(2015-2017)

- A*AAB (Mathematics, Further Mathematics, D&T: Product Design and Physics respectively).

Skills

Sketching

Physical Prototyping

Electronic Prototyping

Additive Manufacturing

Programming

Front End Development

CAD, FEA, Engineering Drawings

Graphic Design

Rendering

Video and Animation

Administration

Presentation + Teamwork Skills

(Low Fidelity Testing, Production Testing)

(Arduino/RasPi/ESP32, Figma)

(3D Scanning, Polymer/Metal Processes)

(Python, C, MATLAB)

(HTML5/CSS3, JS)

(Solidworks, Fusion360, Quicksurface)

(Adobe InDesign, Photoshop, Illustrator)

(Blender, Keyshot)

(Adobe Premiere Pro, After Effects)

(MS Office, Notion, Confluence)

Achievements

- Raised £1200 for British Heart Foundation in 2023 by completing an Ironman 70.3
- Duke of Edinburgh's Awards (Bronze, Silver)

Interests

- Personal design projects; see online portfolio (www.robgarland.co.uk)
- Triathlete
- Sports fan
- Video gamer, sci-fi appreciator

Languages

- English (native)
- German (limited working)

Voluntary Work

- Fundraisers
- Care work