

Yousuf Shahabuddin

+44 7427 375548 | [linkedin.com/in/yousuf-shb](https://www.linkedin.com/in/yousuf-shb) | design.yousufshahabuddin.com |

PROFILE

Imperial College London Design Engineering student with strong creative and analytical skills gained throughout engineering projects, and experience with leading teams both within and outside university. Looking for 6 month internships within the engineering and design sector.

EDUCATION

Imperial College London

2024 – 2028

Design Engineering, MEng

- 2nd Year Student. Modules: Product Design Engineering, FEA, Thermofluids, Human-Centred Design, Sustainable Design Engineering, Electronics, Physical Computing, Maths, Solid Mechanics, Materials & Manufacturing, Computing, Data Science, Entrepreneurship.
- Predicted 2:1 (Upper Second with Honours)

King Edward VI Grammar School, Chelmsford

2017 – 2024

Secondary School

- A-Levels: Maths, Physics, Design & Technology, Chemistry, EPQ
- EPQ: “To what extent can Supersonic Commercial Aviation be Revived?”

EXPERIENCE

Lumped Parameter Modelling of Li-ion Batteries — EPSRC Intern

Jun 2026 – Aug 2026

- Investigated **parameter identifiability** of lumped-parameter lithium-ion battery models; built pipeline, a **Python** toolchain for local **sensitivity analysis**, **Fisher information**, parameter scaling and grouping, and automated reporting and **documentation**.
- Raised the number of identifiable parameters from 1 to 2 of 11 to 4 to 8 of 10 across a state-of-charge by C-rate experimental grid by re-parameterising into identifiable groups.
- **Validated** the model against an independent open-source reference implementation to under 1 mV agreement; identified and corrected three parameter transcription errors in the research group’s simulation package.
- Designed and deployed a **Sobol global sensitivity analysis** pipeline for **HPC** execution, applying statistical variance decomposition to rank parameter influence across the full model.
- Python, NumPy, SciPy, PyBaMM, Git, HPC batch scheduling.

FemAI

Oct 2025 – Present

- Co-founder of a B2B company aimed at improving IVF implantation success rates. Accelerator phase.
- Researched into IVF clinics, regulations, and responsible for pitch deck design.
- Awarded 1st place in the Women’s Longevity hackathon. Currently in progress of launching the company and partnering with IVF clinics.

Automotive Mechanic- Imperial College Eco Marathon Team

Oct 2025 – Present

- Refining the pedal and throttle system using anthropometric data to optimise driver comfort and control.
- Working on tyre fixtures and improving chassis assembly to reduce disassembly time.

Freelance Tech Procurement

Aug 2024– Present

- Developed my own frameworks for tech purchasing based on budget, performance, and user specific needs.
- Successfully advised numerous students, family members, and other individuals on purchasing technology that best suits their specific needs and budgets, specialising in computers, phones and monitors.

Mathematics, Science, and Design Tutor

Dec 2022– Present

- Honed my ability to explain complex concepts in a clear and concise manner to students aged 12-18.
- Built strong rapport and interpersonal skills through one-on-one tutoring sessions, fostering a positive and encouraging learning environment.

Tech Oversight, Team Assistant | FirstGenDoctors

Jul 2025- Sep 2025

- Designed & built their new website to increase engagement with their services and community.
- Collaborating with multidisciplinary teams to launch scalable outreach initiatives, aiming to help students and professionals advance within and enter the medical world.
- Leading strategy, idea generation, and event planning.

InvestIN Summer Engineering Experience

Aug 2023– Aug 2023

- Designed & tested aerofoils to achieve a maximum angle of attack using a water tunnel.
- Coordinated work within my team ensuring our idea was well thought out and rehearsed ahead of the presentation.
- Won 1st place for my pitch on EV recharging and energy redistribution concept within developing cities.

LEGO Group Work Experience

Aug 2022– Aug 2022

- Conducted user research for mobile UX, for future LEGO website designs. Experimented on Miro.
- Created and implemented processes, boosting LEGO's social media engagement.
- Contributed to circular economy meetings, suggesting sustainable initiatives to implement within LEGO.
- Published meta descriptions for major LEGO products and categories to increase engagement with products.

PROJECTS

Portfolio Website Creation

design.yousufshahabuddin.com

- Designed and built my own portfolio website. Hosted using GitHub pages. Project in progress as I experiment with designs (layout, aesthetics, and content).
- Currently testing future layouts on Figma and converting them to code to implement.

British Airways Data Science Job Simulation - Forage

- Completed a virtual project simulating the work of a BA Data Science team.
- Analysed customer review data to identify insights and trends.
- Built a predictive model in Python to understand buying behaviour.
- Developed PowerPoint deliverables to communicate findings to a business audience.

Chimp Game & “Martian” Hexadecimal Communication Robot

- Recreated a robotic system inspired by “The Martian” to point to hex characters; simulated Earth–Mars relay.
- Created a Chimp memory game with LED sequences accessed via an app.

NEXUS — Multiplayer Physical Dance Game for Concert/Event Queues

- Designed a large-screen motion-tracking dance game to foster engagement between people in concert queues
- Virtual dance characters modelled, game programmed with MediaPipe and Unity.
- Extensive research and prototyping carried from idea to final prototype.
- Contributed to making our presentation slides and pitched our product.

R.C. Glider & Collision-Avoidance Robot

- Installed and tested sensors and controls to operate the RC glider.
- Created and coded a crash-avoidance robot intended for use in small crawl spaces.

Drinks Dispenser for Café (“MEDD”, Jeddah)

- Created a drinks dispenser for my client “MEDD” café, a small chain in Jeddah, Saudi Arabia, to allow baristas to focus on serving specialty coffee, rather than serving customers who ask for pre-made beverages.
- Modular drip tray for “hot-swappable” aesthetics, cleaning and repairs. Magnetic opening to allow for easy access to staff for maintenance.
- Woodworking to produce the final product. Sketched, modelled with CAD, prototyped.

LEADERSHIP EXPERIENCE, SKILLS, INTERESTS

University Tours

- I deliver tours to offer holders and prospective students; represented my department and ensured all questions from prospective students and their families were answered and well informed about the university.

Scouts Leader

- Assumed a key role in developing and implementing the curriculum, ensuring the smooth running of weekly sessions. Designed weekly curriculum, mentored Scouts, and ran sessions.
- Awarded Jack Petchey Award for outstanding contribution.

Skills

- Project Management, Figma, Fusion360 (CAD), Ansys, Python, MATLAB, Javascript, C++.

Interests

- NICAS certified lead climber, Archery, Free Diving, Duke of Edinburgh Gold, Global Travel Planner, Airline commercial operations, Aircraft Design, Karting.