

Hashim Jastaniah

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EDUCATION

Imperial College London

MEng Electrical and Electronic Engineering

2025 – 2029

- **Relevant Modules:** Circuits and Systems, Analysis and Design of Circuits, Signals and Systems

St Dominic's Sixth Form College

*A*AA - Mathematics, Physics, Chemistry*

2023 – 2025

TECHNICAL EXPERIENCE AND PROJECTS

2026 PCB Challenge | *KiCAD*

Oct 2026

- UCL × KCL × Oxford × Imperial × Cambridge × Edinburgh; sponsored by PCBWay and Jane Street
- Placed in the top 3 by designing a compact four-layer PCB from a schematic, optimising area under strict rules.
- Routed and validated the design in KiCad within the seven-day competition deadline.

47-Key Ortholinear Keyboard | *KiCAD, FreeCAD, C*

Sep 2026 – Oct 2026

- Engineered a 47-key ortholinear mechanical keyboard completely from scratch, including the PCB and enclosure.
- Developed low-level custom firmware in C using QMK, implementing the keymap as an ortholinear layout.
- Prototyped the design, soldered components, tested functionality and assembled the keyboard.

Radio Sensor Rover – PCB Integration | *KiCAD, LTspice, analogue electronics*

Jun 2026

- Designed radio receiver for rover targets, including amplification, envelope detection and comparison.
- Consolidated the team's schematics into a single PCB, identifying interface issues and ensuring compatibility.
- Worked across subsystem boundaries to coordinate electrical, mechanical and software systems.

Self-Hosted Network Infrastructure | *OpenBSD, FreeBSD, ZFS, OpenWrt*

May 2025 – present

- Maintain a self-hosted network across OpenBSD and FreeBSD including personal website, Git, email and XMPP.
- Built ZFS-backed storage with automated backups and SMB file storage for reliable data access and recovery.
- Integrate OpenWrt router with network, including local DNS for network level blocking of spam and malware.

Project Time Tracker (Beta) | *Python, Pygal*

Dec 2025 – Oct 2026

- Built a focus-time tracker with timer/stopwatch modes, session tagging and persistent CSV logging.
- Created data visualisation tools to analyse time spent by tag, day and week using Pygal.

Conway's Game of Life | *Assembly (6502), cc65*

Feb 2025

- Implemented Conway's Game of Life in 6502 assembly for the Commodore 64, optimising the binary to 444 bytes.

HTTP/1.0 server | *C, sockets*

Apr 2024

- Developed an implementation of a HTTP/1.0 server, written in C using the POSIX sockets API.

LEADERSHIP AND ACTIVITIES

Treasurer – Imperial College Saudi Society

Sep 2026 – present

- Manage society finances, oversee budget allocation and track expenditure to support events and activities.
- Coordinate financial planning and funding requirements, ensuring responsible use of society funds.

Assistant Coach – London Taekwondo Warriors

Feb 2022 – Aug 2022

- Mentored and instructed younger students in martial arts techniques, discipline and training fundamentals.
- Supported students by providing feedback, demonstrating techniques and helping them develop their skills.

SKILLS AND INTERESTS

Hardware and Design Tools: KiCAD, FreeCAD, analogue circuit design, soldering

Programming Languages: C, POSIX shell, Python, Assembly (6502), MATLAB

Developer Tools and Libraries: Git, gdb, Make, Neovim, Emacs, POSIX sockets, raylib, ncurses, LaTeX

Operating Systems: Linux, OpenBSD, FreeBSD, OpenWrt

Free and Open Source Software (FOSS): interested in libre software, human centred design and decentralisation

Global Challenges: Sustainable Innovation: elective to explore interdisciplinary approaches to sustainability

Languages: Arabic (native), English (native)

First Dan Black Belt: World Taekwondo Federation