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Profile

Electronic Engineering and Computer Science student building at the intersection of hardware and software, to a standard set by growing up with sight in one eye: technology that works for everyone, taken from first sketch to finished, documented work. Seeking a 12-month placement or summer internship from summer 2027.

Education

Aston University, Birmingham

BEng (Hons) Electronic Engineering and Computer Science (sandwich course with a placement year) *Expected Jul 2029*

Year 1 average: **80.16%** (Predicted **First Class**)

Relevant modules: AI and Data Science (**100%**), Mathematics (**95%**), Internet Applications and Databases (**92%**), Programming in Python (**91%**), Electronics 1 (**83%**), Electronics 2 (**82%**), Embedded Systems and C, Digital Design (FPGA and VHDL), Data Structures, Algorithms and Object-Oriented Programming (Java), Analogue and Power Electronics, Control Systems and Robotics, AI and Robotics, Communications Systems, Electronic Engineering Team Project

Stanmore College, London

*Pearson BTEC Level 3 National Extended Diploma in Engineering: **D*DD*** *Sep 2022 - Jul 2024*

Units: Engineering Principles, Calculus to Solve Engineering Problems, Microcontroller Systems, CAD, Electronic Devices and Circuits

Technical Skills

Programming languages: C, C++, Python, Rust, TypeScript, JavaScript, SQL, PHP, VHDL, MATLAB, Bash
Embedded and hardware: STM32, ESP32, AVR bare metal, Raspberry Pi Pico, Arduino, KiCad, Proteus, PCB layout, oscilloscope, FPGA, VHDL, Verilog
Software: React, Next.js, FastAPI, Laravel, Node.js, PostgreSQL, MySQL, Redis, WebAssembly, machine learning (scikit-learn)
Tools and platforms: Linux, Docker, Git, GitHub, GitHub Actions, Vercel, Cloudflare, Render, Sentry
Accessibility: WCAG 2.2 AA, axe-core, high-contrast design, screen reader and keyboard testing
Professional: Agile and Scrum (weekly sprints in Linear and GitHub Projects), code review through pull requests, technical writing, teaching and presenting

Projects

PHAEMOS: Predictive Maintenance Platform

Website | Write-up | GitHub

C, C++, Python, Rust, FastAPI, PostgreSQL, Redis, scikit-learn, Next.js, Docker *2026*

- Building four sensor nodes (an ESP32 with 11 sensors, an STM32 that samples vibration at **100 Hz** and runs a **128-point FFT**, an Arduino Nano and a Pico 2W) that report to a FastAPI backend scoring every reading
- Calibrated Isolation Forest per node type reaches **precision 0.83, recall 1.0 and F1 0.91** on a labelled fault set; three anomalies in a row raise an alert and open a maintenance ticket
- Wrote the firmware for all four nodes; designing the hardware in KiCad and Proteus and testing the boards

Zacess: Open-Source Accessibility Tools

Website | Write-up | GitHub

Rust, WebAssembly, TypeScript, React, Astro, Playwright, axe-core *2026*

- Founded a free, open-source family of accessibility tools shaped by reading with one eye: a document reader, an accessibility profile, contrast-checked colour themes and terminal apps sharing one palette
- The reader turns PDFs, scans, Word files and web pages into notes in a reading profile and reads them aloud **entirely on the device**, from a Rust core compiled to WebAssembly
- **Zacess Profile** and the **Zacess Themes** bring contrast-checked palettes to terminals, editors and browsers, code at **7:1**; **Zacess Scenes** and **Games**, 65 pixel art scenes and 14 games in ten themes, ship on crates.io and Homebrew
- **Zero axe violations** at WCAG 2.2 AA in Playwright, with a quality suite in CI that blocks any change making a document harder to read

Vitafolio: CV Platform

Website | Write-up | GitHub

Laravel, PHP 8.4, TiDB, Vue, Tailwind CSS, Docker, Render *2026*

- Free full-stack web app for building, storing and sharing **up to ten versions of a CV**, each with its own theme, link and visibility

LidarSAT by ENGINERDS: GPS-Denied Drone Navigation

Write-up | GitHub

Python, NumPy, pytest, ArduPilot SITL, pymavlink, Cloudflare Workers, GitHub Actions, Linear *2026*

- Four-person research project locating a drone without GPS by matching LiDAR height profiles to public terrain maps, owning evaluation, the drone side and the team's tooling

Footprints: See and Undo What Coding Agents Do

Write-up | GitHub

Rust, SQLite, BLAKE3, zstd, Tauri, MCP, OpenTelemetry, GitHub Actions *2026*

- Built a local ledger in **Rust** that records every file write, shell command and network call a coding agent makes and **undoes any one step or a whole session**, refusing when the file changed since

Experience

Peer Assisted Learning Leader, Python and Electronics — ***Aston University Learning Services, Birmingham***
Python, electronics, peer teaching, session planning — *Sep 2026 - Present*

- Lead weekly Python and electronics sessions for cohorts of **150+ first-year students** from engineering and computing degrees across the College, using worksheets, live coding and quizzes that draw in quieter students
- Mentor first years outside sessions, explaining problems step by step until they can trace their own code or circuit

Student and School Representative, EEE and EECS — ***Aston Students' Union, Birmingham***
student advocacy, stakeholder communication, evidence-based proposals — *Sep 2025 - Present*

- Represent **more than 100 students** across two degrees; turned anonymous feedback on timetabling and workload into evidence-based proposals that led to **extra teaching sessions**
- Appointed **School Representative** (Oct 2026), taking themes from course reps across the College of Engineering and Physical Sciences to School leadership

Diplomatic, Consular and Estates Intern — ***Ghana High Commission, London***
consular processing, biometric data capture, document authentication, estates — *Mar 2024 - Aug 2024*

- Processed visa and passport applications from intake and **biometric capture** to document authentication, serving multiple clients daily with full confidentiality
- Accompanied officers on estates site inspections and kept maintenance records and schedules up to date

Crew Member (part-time) — ***McDonald's, Bilston***
teamwork, working to standards under pressure — *Jan 2026 - Present*

- Work peak shifts in a high-volume team, meeting strict service-time and food safety standards while studying full time; trusted to cover different stations when the restaurant is busy

Leadership and Volunteering

Treasurer, Computing and Electronics Society — ***Aston Students' Union, Birmingham***
budgeting, financial records, committee reporting — *Sep 2026 - Present*

- Manage the society budget and financial records, reporting to the committee and the Students' Union

Student Judge, National Emerging Talent Awards 2026 — ***targetjobs UK (Group GTI)***
assessment against criteria, scoring, panel judging — *Feb 2026*

- Evaluated employer submissions for **Best Placement or Internship Programme** against qualitative and scoring criteria

Fundraising Volunteer — ***Cancer Research UK***
fundraising, outreach, endurance — *Feb 2026 - Mar 2026*

- Ran **50 km+** in 5 km runs across February and March and managed my own fundraising page, a cause personal to me
- Part of a national campaign that raised **over £797,000**, plus **£159,000** in Gift Aid

Research and Publications

git-unlocked — DOI | ORCID | Write-up | GitHub
Technical note: An Open-Source Modular Curriculum for Git and Version Control Education — *Zenodo, Oct 2026*

- Built a free, open-source course that takes learners from their first commit to professional Git and the main hosting platforms, in modular sections anyone can reuse or adapt
- Researched how version control is taught and published a technical note on the course's design, with a permanent DOI

Achievements

- **Top 40**, Black Heritage Undergraduate of the Year 2026 (targetjobs and Sky); **Best and Most Hardworking Student**, Stanmore College 2024
- **Learning in public**: **50+** posts on my technical blog, **75+** Today I Learned notes, a fortnightly newsletter, educational notes and open-source gists
- **Open source**: a Linux kernel fix to the PolarFire SoC GPIO driver, applied by the GPIO maintainer; ArduPilot documentation fixes found while building LidarSAT's flight simulation; merged work in FrankenPHP (Docker image CI), iTerm2-Color-Schemes (licence metadata and a CI check) and WakaTime for Zotero; Rust crates on crates.io and the Zacess themes across popular editor stores: More contributions

Additional Information

Spoken languages: English (fluent), Twi and Ga (native), French and Spanish (elementary)
Certifications: Google Cloud European University Challenge (Google, 2026); MATLAB Onramp (MathWorks, 2026)
Interests: playing the piano; fitness and running; tinkering with electronics at home; contributing to open source; designing high-contrast colour themes for code editors