

David Agugharam

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EDUCATION

University of Hertfordshire

Bachelor of Science in Computer Science (Software Engineering)

Hatfield, UK

Expected May 2027

- Predicted **First Class Honours**
- Relevant coursework: Artificial Intelligence, Operating Systems & Networks, Algorithms & Data Structures, Database Systems, Principles & Practices of Large-Scale Programming, Team Software Project

PROJECTS

Item Sharing Association System | *Java, OOP, File I/O, Git*

Jan – Apr 2026

- Built the **file persistence layer** (two classes) that the rest of a four-person team integrated against, defining the load and save interfaces
- Designed a **two-pass file loader** that resolves object dependencies at load time, reconstructing all member and item relationships without a database
- Set up the team **Git workflow** and wrote a contribution guide so teammates could work in parallel to deadline

Secure Authentication System | *Java, Spring Boot, REST API*

Jan 2026

- Built a Spring Boot authentication service with **password hashing**, **role-based access control**, and REST endpoints with structured input validation

AI Safety Gridworlds | *Python, Reinforcement Learning*

Apr 2026

- Implemented three **reinforcement-learning** gridworld environments in Python, each enforcing a different agent safety constraint
- Compared agent behaviour across policy types and analysed where outcomes diverged from expected safe behaviour

Automated Gate System | *C++, ESP32, Wokwi*

Mar 2026

- Designed and implemented an **embedded gate controller**, taking it from initial design to a tested working build
- Debugged library conflicts, timing logic, and **rising-edge detection** to reach correct behaviour across all test cases

Web Accessibility Hackathon | *WAVE, Google Lighthouse, HTML & CSS*

Jan 2026

- Audited a live website with **WAVE** and **Google Lighthouse** in a team, then implemented fixes for the **accessibility** issues identified

EXPERIENCE

Bright Network

Internship Experience UK (IEUK), Engineering & Technology

Remote

Jun 2026

- Built a **Python (pandas)** pipeline that validated and analysed **5,000 telemetry readings** across 10 offshore wind turbines, flagging maintenance cases on temperature and vibration thresholds (2 of 10 flagged)
- Packaged the tool with an **argparse CLI** and **Docker**, and wrote an engineering report recommending a real-time **streaming architecture** (IoT gateway, message queue, stream processing, hot/cold storage)
- Attended industry keynotes from **Google, JLR, Lloyds** and **Bank of America**

Aptech

Website Developer

Remote

Oct – Dec 2023

- Contributed **front-end web development** tasks within a small team, delivering assigned components to deadline
- Wrote shared setup and contribution documentation that reduced repeat questions during onboarding
- Tested pages across **multiple browsers and devices**, logging and reporting defects before release

British Heart Foundation

Retail Volunteer

Edgware, London

Apr – Jun 2024

- Sorted, priced and displayed donated stock and served customers at the till in a busy charity shop, supporting daily retail operations and Gift Aid sign-ups

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

ISC2 Certified in Cybersecurity (CC)

Oct 2025

Foundations in Cybersecurity (Google)

Jul 2025

Crash Course on Python (Google)

Jul 2025

AI & Java Workshop, Microsoft Reactor (LangChain4j, LLM API integration)

Feb 2026

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, HTML & CSS

Tools & Technologies: Git, Linux, SQL, Spring Boot, LangChain4j, Bash, VS Code, NetBeans, Wokwi, Microsoft 365

Networking & Security: TCP/IP, subnetting, static routing, DHCP, access control

Concepts: OOP, algorithms & data structures, REST APIs, systems troubleshooting, technical documentation