

SYED ALI ABBAS

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Education

University College London (UCL)

MEng Computer Science – First Class Honours in Year 1 and Year 2

September 2023 – June 2027

London, UK

Achievements: 100% Merit Scholarship, Programming Tutor

Relevant Modules: Algorithms, Software Engineering, Computer Architecture and Concurrency, Computer Systems, Machine Learning for Visual Computing, Machine Learning for Robotics, Research Methods

Cedar College

August 2021 – July 2023

Cambridge International A Levels – 4A (Computer Science, Mathematics, Physics, Chemistry)*

Karachi, Pakistan

Experience

Software Development Intern

December 2025 – January 2026

Sapiens Nova Academy

Remote

- Designed a production-grade platform supporting AI, robotics, and entrepreneurship programmes across 6+ countries.
- Built a hybrid static/server-rendered web application using Astro, React, and TypeScript with selective hydration.
- Implemented secure enrolment and payment workflows using Stripe Checkout and webhooks.
- Developed an AI-powered chat assistant using Retrieval-Augmented Generation (RAG) with Hugging Face embeddings and PostgreSQL (pgvector).

Systems Engineering Intern

October 2024 – March 2025

Hewlett-Packard (HP)

London, UK

- Engineered 3 production-ready RAG pipelines (RFQ analysis, telemetry interpretation, document change detection) processing diverse data formats including PDFs and Excel files.
- Integrated Llama 3.1 8B for generating responses based on user queries and relevant documents.
- Developed a multi-tab Gradio interface with file upload, real-time chat, and accuracy metrics dashboard.

Full-Stack Developer Intern

June 2025 – July 2025

Other Dev

London, UK

- Built a production-ready real estate platform showcasing 12+ luxury properties using Astro, React, and TypeScript.
- Delivered a responsive, mobile-first experience with performance optimisations achieving sub-2s load times.
- Integrated dynamic property filtering, GSAP-based animations, and lead generation workflows to support client inquiries and conversions.

Projects & Leadership

Student Grade Management System

December 2024

- Developed a full-stack web application using a Spring Boot REST API backend and React frontend to manage student records, modules, and grades.
- Achieved 100% test coverage through test-driven development, implementing comprehensive unit and integration tests across all API endpoints.

Patient Data Management System

March 2024

- Built a Java-based web application managing 10,000+ patient records stored in CSV files.
- Implemented efficient search and filtering across patient data fields, reducing query time by 30%.
- Applied MVC architecture to ensure scalability, modularity, and robust error handling.

Robotics and Engineering Wing

September 2021 – March 2023

Executive Member and Head of Robotics & Physics Modules (Scinnova VI)

Karachi, Pakistan

- Organised robotics and web development workshops for 100+ students, covering circuit design and programming.
- Led hands-on robotics projects, including self-balancing and obstacle-avoiding robots, attracting 50 new members.
- Coordinated the InterSchool Science Olympiad (Scinnova VI), designing robotics and physics modules for 400+ participants and increasing participation by 30%.
- Built and deployed Arduino-based automated lighting and water management systems on campus.

Technical Skills

Programming: Python, Java, C, JavaScript, TypeScript, SQL, Swift, Haskell, MATLAB, MIPS Assembly

Frameworks and Tools: Astro, Next.js, React, Tailwind CSS, Spring Boot, Maven, REST APIs, Docker, PyTorch, Hugging Face, LangChain, PostgreSQL

Robotics & Embedded Systems: Arduino, ESP32, Sensors & Actuators, Automated Systems

Awards: 2nd Place - Healthcare Hackathon (Carradale Futures), Excellence Award - Scinnova VI (for exemplary leadership and module design), Duke of Edinburgh's Bronze & Silver Award

Certifications: AWS Cloud Practitioner, IBM Enterprise Design Thinking Practitioner, IBM Getting Started with Data