# Tuhammad Asad Majeed

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### Education

## University College London

Sep 2024 – June 2027

Bachelor of Science in Computer Science - First Class Honors

London, United Kingdom

Achievements: 100% Tuition Scholarship - Undergraduate Teaching Assisstant for ENGF0001, COMP0002, COMP0004,

Transition Mentor, One Desk IT Student Assisstant.

Relevant Modules: Algorithms, Theory of Computation, Discrete Mathematics, Introductory Math for Computer Science.

Object-Oriented Programming, Principles of Programming.

Cedar College

Aug 2022 - July 2024

Cambridge International A Level - 4A\*s (Physics, Mathematics, Computer Science, Chemistry)

Karachi, Pakistan

Achievements: 100% Merit Scholarship Awardee, Treasurer of the Student Council, Lead Organizer of Cedar Eats and Scinnova.

# Experience

# Software Engineering Intern

June 2025 - August 2025

Network Freight Solution

Karachi, Pakistan

- Developed a shipment tracking system using Puppeteer and headless browser scraping, enabling real-time tracking for air shipments for over 200 carriers, reducing manual tracking time by several hours daily.
- Containerized the server using Docker, ensuring consistent environment replication and reducing deployment errors.
- Configured secure cross-origin API requests using Express is and CORS, enabling seamless communication between the frontend and the Render backend.

## Coding and Robotics Instructor

May 2025 - Present

BlueShift Education

London, United Kingdom

- Delivered after-school coding and robotics sessions using Scratch, Minecraft, Arduino, LEGO and VR, making computing concepts engaging and accessible.
- Designed interactive challenges that sparked curiosity in STEM and encouraged students to pursue coding beyond the classroom.

## Computer Science Outreach Ambassador

February 2025 – Present

UCL Computer Science

- London, United Kingdom • Delivered presentations and workshops, using interactive demos to introduce computer science concepts to students.
- Taught robotics and Python coding to 50+ students using hands-on kits, encouraging early STEM exploration.

#### Projects

#### **AgriVisionAI** | Python, HuggingFace, PyTorch, ViT

August 2025

- Fine-tuned a Vision Transformer (ViT) with PyTorch, achieving >99% validation accuracy in plant disease classification.
- Engineered a production-grade training pipeline with mixed-precision, learning rate scheduling and data augmentation.
- Engineered the core computer vision module for an autonomous precision agriculture drone, enabling in-field diagnostics.

## Finance Tracker | React, Node.js, React Native, PostgreSQL, AWS

- Architected a full-stack personal finance platform, integrating the Plaid API to provide users with a unified view of their multi-institution financial data, secured with AWS Cognito and JWT-based authentication.
- Designed for production-readiness with a multi-layered testing strategy, planning for unit/integration coverage and end-to-end validation of critical user flows.
- Expanded the platform's reach by developing a cross-platform mobile application, for a consistent user experience.

## AI Job Application Assistant | Python, FastAPI, JavaScript, HTML, spaCy, Langchain, Google Gemini

July 2025

- Engineered a RAG pipeline with FastAPI, delivering personalized, AI-generated application content within 3 seconds.
- Developed an intelligent selection module using spaCy NLP that improved the relevance of selected evidence by over 75% compared to a baseline keyword search, ensuring highly strategic AI output.
- Built a secure Chrome Extension, ensuring user privacy by leveraging 100% local storage for all personal profile data.

# WonderRoute | React, Node.js, Express.js, Google Maps APIs, Gemini AI API, REST APIs, CSS

June 2025

- Built a full-stack web app using React, Node.js, Express, and Gemini APIs for dynamic, multi-user itinerary generation.
- Integrated user personas, location syncing, and real-time route optimization by implementing robust API communication, middleware logic, and asynchronous request handling between the frontend and backend.
- Secured 2nd place at the Google AI Hackathon 2025 amongst 55 shortlisted students out of 450 applicants.

## Technical Skills

Languages: Python, C, Java, JavaScript, TypeScript SQL, Haskell.

Web Technologies: HTML, CSS, React, Node.js, Express.js, REST APIs.

Frameworks and Libraries: Langchain, spaCy, Flask, NumPy, Scikit-Learn, PyTorch, OpenCV, Puppeteer, Selenium.

Tools and Technologies: VS Code, IntellijIDEA, Arduino, Cursor JupyterLab, Linux, Git, GitHub, Vercel, Render,

Docker, AWS (Cognito), PostgreSQL.

Certifications: CS50x