

RAGHAV AWASTHI

+447448420483 | raghavawasthi2005@gmail.com | [linkedin.com/in/raghavawasthi2005](https://www.linkedin.com/in/raghavawasthi2005) | github.com/raghav2005

EDUCATION

University College London (UCL)	London, UK
<i>Bachelor of Science in Computer Science with predicted First Class Honours</i>	<i>Sep 2023 — Jun 2026</i>
Dubai College	Dubai, UAE
<i>A*A*A*A*A in A-Levels and 11 9s in GCSEs</i>	<i>Aug 2016 — Jun 2023</i>

EXPERIENCE

Cybersecurity Analyst	Jun 2025 — Aug 2025
<i>Barclays</i>	<i>Knutsford, UK</i>
<ul style="list-style-type: none">Delivered a 60-page PQC/HSM report: mapped cryptography use across 30+ services; built HSM PQC capability matrix & gap analysis; proposed 5-phase PQC roadmap; projected 20–30% faster PQC migration.Built Python services to ingest CertNow/ServiceFirst, auto-enrich CA chains & classify root causes; added risk scoring & ServiceNow descriptor standardisation, reducing triage time by 25% and flagging 30+ high-risk certs.Researched and identified 100+ high-signal threat keywords for internal company risk; deployed solutions to production and increased detections by 15-20% in pilot.	
Full-Stack Developer	Aug 2024 — Oct 2024
<i>Adamas Data</i>	<i>London, UK</i>
<ul style="list-style-type: none">Architected and shipped a production-grade DBMS web application end-to-end: FastAPI micro-services; PostgreSQL + PostGIS data layer; responsive Next.js front-end with server-side rendering.Designed versioned REST API (30+ endpoints) over PostgreSQL + PostGIS; indexed queries to serve 140M+ rows with median latency <3s across 150+ filters; shipped via Dockerised CI/CD (<10-min rollback).	
AI/ML and Quantum Security Intern	Jun 2024 — Aug 2024
<i>Tech Mahindra</i>	<i>Pune, India</i>
<ul style="list-style-type: none">Led a 5-person R&D team to build ThaiLLM (7B parameter model); fine-tuned with LoRA on 120k curated records; cut mean GPU inference latency by 20%; raised domain F1 by 15% on a 6k-question benchmark.Embedded Retrieval-Augmented Generation (RAG) into Garuda (company's biggest LLM); Hybrid BM25 + MiniLM re-ranker pushed top-1 retrieval MRR up 25%; reduced hallucination rate to 7%.Researched NIST PQC KEM finalists and began implementing hybrid TLS 1.3 with ML-KEM POC in Python.	

PROJECTS

Quantum Proximity Gateway (IBM & UCL) <i>Python, Rust, Next.js, C++</i>	Oct 2024 — May 2025
<ul style="list-style-type: none">An IoT edge-to-cloud system (ESP32 BLE beacons, Raspberry Pi facial recognition, Pico USB-HID emulation) which auto-authenticates hot-desk PCs on user approach.	
Playo (Audiobook Generator App) <i>Python, Firebase, OpenAI, ElevenLabs, TypeScript</i>	Jan 2024
<ul style="list-style-type: none">Mobile application that uses user prompts & preferences to create fully customised stories as audiobooks.	
Assembly Code Visualiser <i>Node.js, Express.js, SQL, Docker</i>	Jun 2022 — Mar 2023
<ul style="list-style-type: none">Built a web application Assembly IDE and interactive Little Man Computer visualiser, letting students step through CPU/RAM states. Acts as a learning/teaching platform, allowing teachers to assign challenges.	

TECHNICAL SKILLS

Languages: Python, C/C++, Rust, Bash, SQL, JS/TS, Java, Haskell, HTML/CSS
Backend/Web: FastAPI, Flask, Node.js, React/Next.js, Pydantic, Express.js
Data/ML/DB: PostgreSQL, SQLite, Redis, SQLAlchemy, Alembic, Pandas, NumPy, PyTorch, TensorFlow, Matplotlib
Developer Tools/Testing: Git, Docker, VS Code, Emacs, JUnit, Selenium
Other: Gradio, OpenSSL, Metasploit, IBM Qiskit, Excel, Figma, Photoshop, GIMP

AWARDS/ACHIEVEMENTS & LEADERSHIP

- Ranked **1st** (school) in the **ISMETF** (International Schools Mathematics Teacher Foundation) competition, 2022.
- Ranked **Top 5** in the **national** University of Wollongong, Dubai, **Mathalon**, 2022.
- Achieved **2x Gold** awards in **UKMT** (UK Maths Trust) **Senior** and **2x Gold** awards in **UKMT Intermediate**.
- Received **Highest Achiever** academic excellence award for **Computer Science** from headmaster, 2023.
- Cricket vice-captain & programming tutor** for 1st years, UCL; **Technical blog writer**, UCL Devs Blog; 1st XI **cricket vice-captain & CS teaching assistant**, Dubai College; **Head of Dubai Computing Community**, 2021-23.