


# RAGHAV AWASTHI

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## EDUCATION

### University College London (UCL)

BSc Computer Science

Sept. 2023 – June 2026

Year 1 grade: First class

### Dubai College

A-Levels

Computer Science, Physics, Maths, Further Maths, and EPQ (A\*A\*A\*A\*A)

Aug. 2016 – June 2023

## EXPERIENCE

### Full-Stack Developer | Adamas Data

Aug. 2024 – Oct. 2024

**Skills:** FastAPI, Postgres, JS, LeafletJS, Python, Bash

- Architected and deployed a **full-stack web application** from the ground up using **FastAPI** and **Postgres**, functioning as a **Database Management System (DBMS)** with an intuitive user interface.
- Engineered **secure, high-performance endpoints** capable of querying, searching, and sorting through **140+ billion data points in seconds**, accommodating **150+ search criteria**.
- Integrated an **interactive map-plotting feature** via **LeafletJS** to enhance data visualisation, streamlining interpretation and improving overall user experience.

### AI/ML and Quantum Security Intern | Tech Mahindra - Makers Lab

June 2024 – Aug. 2024

**Skills:** HuggingFace, PyTorch, Selenium, Gradio, JS, Flask, Bash, IBM Qiskit, OpenSSL

- Led a **5-member team** to **train and deploy ThaiLLM**, a bilingual Large Language Model (LLM) fine-tuned for both Thai and English. Achieved a **20% reduction in inference latency** and increased domain-specific accuracy by approximately **15%** for healthcare, national identification, and other government services.
- Integrated **Retrieval-Augmented Generation (RAG)** into **Garuda**, one of the company's largest LLM initiatives, boosting knowledge retrieval performance and precision by **25%** for the Bahasa LLM.
- Researched **Post-Quantum Cryptographic (PQC) Key Encapsulation Mechanisms (KEM)** implementations in Python and started integration with **Transport Layer Security (TLS)**.
- Authored comprehensive **research reports and documentation** detailing design decisions, performance metrics, and best practices across AI and quantum security projects.

### Student Intern | Virsec Systems Inc.


July 2021 – Aug. 2021

**Skills:** Python, PyTorch, Linux

- Contributed to the design and implementation of a **runtime malware protection application** for **Linux** environments, leveraging **Python** and **PyTorch** for **AI-driven threat detection**.
- Researched and evaluated cutting-edge **cybersecurity methodologies**, including **penetration testing** and **machine learning** approaches, to proactively identify and prevent attacks.
- Collaborated with **cross-functional teams** to integrate and refine **security measures**, ensuring robust performance and reliability in **production-level deployments**.


## PROJECTS

### Audio Book Generator App (E/Acc Hackathon) **Skills:** Python, Firebase, OpenAI, ElevenLabs, TypeScript

Developed a **mobile app** which takes in user prompts and preferences for a storyline and narration, and produces a **fully customised story as an audio book**  **in**.

### Assembly Code Visualiser and Editor

**Skills:** NodeJS, ExpressJS, SQL

Created a platform for students to learn about **Computer Architecture**. Can be used as a learning tool to assign practice **Assembly Code** problems, and includes a **Little Man Computer** visualisation .

## TECHNICAL SKILLS

### Proficient:

- **Languages:** Python, C, JavaScript, Bash, SQL
- **Frameworks/Tools:** NodeJS, ExpressJS, jQuery, Git, Flask, Postgres, FastAPI, Numpy, Pandas, PyTorch

### Experienced:

- **Languages:** Rust, Java, Haskell, C++
- **Frameworks/Tools:** Metasploit, Selenium, Docker, NextJS