

KABIR GHAI

Software Engineering Intern

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SUMMARY

Computer Science undergraduate specialising in AI and backend systems, with a strong foundation in Data Structures and Algorithms, and software architecture and principles. I've ranked top out of 200 in university-level competitive coding challenges, demonstrating advanced problem-solving under pressure. I enjoy building scalable, secure systems and shipping real-world products to benefit others through test-driven development, ensuring robust architectures, and having clean, maintainable code.

EXPERIENCE

Flagstone (London, England)

📅 08/2024 - 08/2024

- Shadowed a senior engineer for 14 days, where I gained insights into company workflows, project management and how companies use Microsoft Azure
- Contributed to team discussions and meetings, deepening understanding of enterprise-level backend systems and deployment strategies
- Showcased teamwork in FinTech industry by completing 2 collaborative projects with other interns

Bright Young Things Tuition (London, England)

📅 10/2019 - 11/2023

- Organised and led two Computer Science Summer Schools, teaching programming fundamentals to 20 children aged 10-13
- Mentored students ages 3 to 16 in Maths, English and Computer Science
- Promoted to Centre Supervisor within 12 months for exceptional performance, volunteering contributions, and high student achievement across 60+ learners
- Collaborated with other tutors to devise individual student plans with weekly feedback sessions

PROJECTS

QueryWhisperer

📅 03/2025 - Present

🌐 <https://querywhisperer.up.railway.app> | github.com/CypherGuy/QueryWhisperer

Developed and deployed a production-ready backend for a web-based assistant that converts natural language into executable SQL queries using live schema context. The system features secure authentication, database persistence, and a modular interface for integrating Large Language Models.

- Designed and deployed the backend using FastAPI, SQLAlchemy, and PostgreSQL with secure session-based authentication and user management
- Engineered a schema-aware text-to-SQL translation pipeline by dynamically injecting table metadata into prompt templates for model-agnostic query generation
- Deployed the service using Railway with environment-specific configurations and persistent cloud-hosted PostgreSQL
- Built a minimal React frontend for schema input and query submission, with plans for full UI/UX expansion and query preview

AoCode

📅 12/2024 - 02/2025

🌐 <https://github.com/CypherGuy/AOCode>

I designed and implemented a customisable Python-based IDE for Advent of Code, featuring a custom-built syntax highlighter, quick submission system, automated problem fetching, and a personalised utility file for each user.

- Improved code execution security by utilizing Python's Subprocess library with over 30 tests
- Utilised PySide to create a simplistic UI with the question on the left, and the code panel over a terminal on the right
- Implemented functionality for automated input retrieval and result validation, streamlining the problem-solving process

ACHIEVEMENTS



A-Level Scholarship for outstanding GCSE performance



Awarded 1st place in my university's Advent of Code 2024



Silver Arrow 2022 - Archery competition



Three successful hackathon projects



Developed and led two Summer Schools



Promoted to Centre Supervisor within a year

TECHNICAL & SOFT SKILLS

Languages & Tools

Python, Java, SQL, JavaScript, Git, Azure, Docker, PostgreSQL

Frameworks

LangChain, Streamlit, PySide, FastAPI, React, Next.JS, Railway

Hard & Soft Skills

OOP, NLP, Test-driven development, Teamwork, Communication, Leadership, Time Management

EDUCATION

Computer Science with AI

The University of Kent

📅 09/2023 - Present

- Yr1: First Class (82%)
- Yr2: First Class (predicted)

A Levels

The John Lyon School

📅 09/2021 - 09/2023

- Maths, Computer Science, Economics

GCSE's

The John Lyon School

📅 09/2016 - 09/2021

- 9 GCSEs Including Mathematics and Computer Science (Grade 9/8)