

# Saif Nasir

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## EDUCATION

### King's College London

London, UK

*Bachelor of Science (Hons) in Computer Science*

*September 2022 – May 2025*

- Predicted grade: First class.
- BSc project: AI-driven system to optimize compiler using genetic algorithms to enhance program performance.
- Relevant Courses: Data Structures (92%), Database Systems (82%), Elementary Logic (80%), Optimization Methods and Concurrency, Compilers and Formal languages, Network Security.
- Inclusive Careers Ambassador: Hosted panel events and led workshop about web development to 100+ students.
- Hackathons: Participated in 5+ hackathons, including achieving 1st place at Datalogz among 120+ participants.

## EXPERIENCE

### Software Developer Intern

May 2024 – July 2024

*Sky Bullion Trading*

*Dubai, UAE*

- Developed and launched a comprehensive financial dashboard for real-time tracking of gold prices and market trends, enhancing data-driven decision-making processes that increased trading accuracy by 35%.
- Implemented RAG (Retrieval-Augmented Generation) system with vector similarity search, achieving 92% accuracy in matching questions with historical solutions.

### Software Developer Intern

November 2023 – March 2024

*King's Labs*

*London, UK*

- Created a robust Django API that retrieved daily trading data, displaying equity and derivative performance metrics along with real-time holdings and derivative activities.
- Built an automated data pipeline utilizing Cron jobs for real-time financial market updates, reducing manual processing time by 20 hours per month.
- Developed interactive financial charts that streamlined market analysis for the trading team, providing clear trend visualizations which led to improved trading strategies and informed decision-making.

## PROJECTS

### Sky Tutors Platform | TypeScript, Python

July 2024 – September 2024

- Architected and launched a full-stack online tutoring platform using Next.js, PostgreSQL, and Prisma, processing 80+ tutoring sessions monthly.
- Enhanced database performance through query optimization and caching strategies, yielding a 40% reduction in page load time.

### InfOS Operating System Development | C/C++

February 2024 – March 2024

- Built essential OS features such as page permissions and deferred copy-in on Linux virtual machine, enabling on-demand paging and improving memory allocation efficiency by 30% during resource-intensive tasks.

### Digital Journaling App | Javascript, Python

January 2024 – March 2024

- Architected the backend for a digital journaling application using Django REST Framework, implementing features such as creating and sharing templates, mood tracking, multimedia file support, and PDF/RTF export.
- Designed and integrated a JWT-based authentication system, ensuring secure access and data protection measures.

### University of Cambridge - Unibots | C++, Python

September 2023 – October 2023

- Programmed C++ software for Arduino-driven autonomous robot, achieving a 20% increase in efficiency during ping pong ball collection in a competitive multi-robot environment.
- Designed mecanum wheel control algorithms for omnidirectional movement and added adversary avoidance systems, resulting in smoother performance.

## SKILLS

**Languages:** Python, C++, SQL (Postgres), Typescript, Java, Scala

**Frameworks and Libraries:** Next.js, Node.js, Prisma, Django, Pandas, NumPy, Matplotlib, Shadcn

**Developer Tools:** Git, GitHub, Docker, Jenkins, IntelliJ, Vercel, SonarQube