

CALEB KAN

+44 0782 8210751 | calebkan1106@gmail.com | [in linkedin.com/in/caleb-kan](https://www.linkedin.com/in/caleb-kan) | github.com/caleb-kan | calebkan.com

EDUCATION

Imperial College London

Degree: Bachelor of Engineering – BEng, Computing

Grade: First-Class Honours (Predicted)

London, United Kingdom

Sep 2023 – Jun 2026

SKILLS

Languages: Native: English, Mandarin, Cantonese

Programming Languages: C, Haskell, HTML/CSS, Java, JavaScript, Kotlin, Prolog, Python, Scala, SQL, TypeScript, YAML

Databases: Firebase, Milvus, MongoDB, MySQL, Supabase

Libraries: BeautifulSoup4, Hugging Face, Matplotlib, NumPy, Pandas, Playwright, Ray, Selenium

Frameworks: Django, Expo, FastAPI, Flask, Jest, JUnit, LangChain, React Native, ScalaTest, Streamlit

Developer Tools: CI/CD (GitHub/GitLab), CMake, Docker, GDB, Git, JetBrains, Linux, Node.js, Valgrind, Vercel, VS Code

EXPERIENCE

Incoming Software Engineer Intern

HubSpot

- Placeholder

Jul 2025 – Sep 2025

London, United Kingdom

Software Engineer Intern

Midas Advisory

- Automated non-operating expense data processing from the top 15 U.S. banks using open-source LLMs, web scraping, data-source APIs, and Ray parallelisation, cutting processing time from hours to minutes and boosting accuracy to 97%.
- Implemented a Milvus vector-database with BAAI/bge-m3 embeddings and RRFRanker hybrid search, pairing a 93% accurate small LLM for data retrieval with a large LLM to deliver structured insights at enterprise scale reliably.

Aug 2024 – Oct 2024

London, United Kingdom

Research Intern

Department of Computer Science, City University of Hong Kong

- Achieved 92.5% accuracy in GDPR compliance detection across 400+ websites by developing a GDPR compliance checker extension utilising BeautifulSoup4, LangChain, and OpenAI's LLM for automated analysis of a website's privacy policy.
- Increased daily active users by 45%, improved user-reported understanding (from 3.2 to 4.7/5), and boosted successful data erasure requests by 150% (100+ in first month) through a one-click feature that automates sending requests to websites.

Jul 2023 – Jul 2023

Hong Kong

PROJECTS

WACC (Compiler Project) | Scala

- Developed a WACC compiler frontend, building a lexer and parser for syntax analysis, creating an abstract syntax tree representation, implementing a symbol table for semantic checks, and designing descriptive error reporting to aid debugging.
- Implemented the backend using TAC intermediate representation with ARM32/AArch64 support, architecture-specific dependencies, code optimisations (constant propagation, folding, control flow analysis), and a standard math library.

Jan 2025 – Mar 2025

PintOS (Operating Systems Project) | C

- Enhanced OS kernel functionality by implementing timer-based thread synchronisation, advanced priority scheduling with priority donation, and the BSD scheduler, ensuring efficient multitasking and thread management.
- Developed a virtual memory subsystem, including paging, frame management with second-chance eviction, and supplementary page tables, enabling support for user programs, memory-mapped files, and stack growth.

Oct 2024 – Dec 2024

ARMv8 Emulator, Assembler, and Visualiser | C

- Engineered a cycle-accurate ARMv8 emulator and two-pass assembler, implementing precise register, memory, and instruction management including robust error handling in compliance with ARMv8 specifications.
- Developed a SDL2-based GUI for real-time emulation visualisation, featuring drag-and-drop assembly parsing and dynamic rendering of CPU states, registers, memory maps, and ALU.

May 2024 – Jun 2024

AI Research Agent | Python

- Developed a AI research agent using LangChain, OpenAI's LLM, Serper API, BeautifulSoup4, and X API for automated search, web scraping, cited summaries, and content posting. Integrated MongoDB Atlas for geolocation tracking.
- Implemented a Streamlit web app enabling anyone to use the AI research agent, integrating geospatial visualisation to map worldwide usage using geolocation data stored in MongoDB Atlas. Analysed engagement patterns of 70+ global users.

Aug 2023 – Sep 2023

HONOURS AND AWARDS

1st Place – G-Research London Coding Challenge 2024

Issued by G-Research

- Achieved First Place among 40+ contestants in the G-Research London Coding Challenge, a 3-hour programming contest where participants compete to achieve the highest score on a given problem.