

Caleb Kan

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EDUCATION

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| Imperial College London | London, United Kingdom |
| Degree: Bachelor of Engineering – BEng, Computing | Sep. 2023 – Jun. 2026 |
| Grade: First-Class Honours (Predicted) | |

EXPERIENCE

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|---|------------------------|
| Software Engineer Intern | Aug. 2024 – Present |
| Midas Advisory Python | London, United Kingdom |
| <ul style="list-style-type: none">Engineered a modular app for processing non-operating expense data of the top 15 U.S. banks by integrating open-source LLMs, web scraping tools (Playwright, BeautifulSoup4, Selenium), and APIs (Requests). Reduced data collection time from hours to minutes and increasing accuracy from 85% to 97%.Decreased data retrieval time from minutes to seconds by implementing a vector database (Milvus) with embeddings; engineered a dual-model system using a small LLM for 93% accurate data filtering and a large LLM (LLama 3.1) for schema-based reporting.Developed an adaptable architecture that seamlessly integrates new models, enhancing market intelligence and banking sector analysis capabilities to support informed decision-making across departments. | |
| Research Intern | Jul. 2023 – Jul. 2023 |
| Department of Computer Science, City University of Hong Kong Python | Kowloon, Hong Kong |
| <ul style="list-style-type: none">Achieved 92.5% accuracy in GDPR compliance detection across 400+ websites by developing a GDPR compliance checker extension with a distinguished professor, utilising BeautifulSoup4, LangChain, and OpenAI's LLM for automated analysis.Increased daily active users by 45% and improved user-reported compliance understanding from 3.2 to 4.7 on a 5-point scale by designing a user-friendly interface displaying website GDPR compliance status, enhancing data privacy awareness.Boosted successful data erasure request rate by 150%, processing over 100 requests in the first month by creating a one-click feature for automated data erasure requests, streamlining the exercise of GDPR rights. | |

PROJECTS

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| ARMv8 Emulator, Assembler, and Visualiser C | May. 2024 – Jun. 2024 |
| <ul style="list-style-type: none">Engineered a cycle-accurate ARMv8 emulator and two-pass assembler in C, implementing precise memory management and robust error handling per ARMv8 specifications.Developed a multi-threaded SDL2-based GUI for real-time emulation visualisation, featuring drag-and-drop assembly parsing and dynamic rendering of CPU states, registers, and memory maps. | |
| Chess AI Kotlin | Dec. 2023 – Jan. 2024 |
| <ul style="list-style-type: none">Developed a Kotlin AI for a pawn race chess game, implementing complete game logic, move validation, and an ASCII terminal interface. Optimised AI decision-making using a depth-limited minimax algorithm with alpha-beta pruning. | |
| AI Research Agent Python, NoSQL | Jul. 2023 – Aug. 2023 |
| <ul style="list-style-type: none">Built a Python AI research agent using LangChain and OpenAI's LLM for cited summaries, integrating web scraping, search, automated content posting on X, and geolocation tracking via BeautifulSoup4, Serper API, X API, and MongoDB Atlas.Created a Streamlit geospatial visualisation pipeline to map global AI agent usage, leveraging geolocation data from MongoDB Atlas to analyse user engagement patterns. | |

SKILLS

Languages: Native: English · Mandarin · Cantonese
Programming Languages: C · Haskell · HTML/CSS · Java · Kotlin · NoSQL · Python · SQL
Frameworks: Bootstrap · Django · FastAPI · Firebase · Flask · LangChain · Milvus · MongoDB · MySQL · PostgreSQL · SQLite · Streamlit
Developer Tools: Android Studio · Atom · BitBucket · CLion · Git · GitHub · GitLab · GNU Debugger · Google Colab · Hugging Face · IntelliJ · ~~LaTeX~~ · Ollama · PyCharm · Unix · Valgrind · Visual Studio · VS Code · Xcode