

# Caleb Kan

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## EDUCATION

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

## WORK EXPERIENCE

<b>Software Engineer Intern</b>	Aug. 2024 – Present
<b>Midas Advisory</b>   Python	London, United Kingdom
<ul style="list-style-type: none"><li>Reduced data collection time from hours to minutes and increased accuracy from 85% to 97% by architecting a modular app for non-operating expense data processing of the top 15 U.S. banks, integrating open-source LLMs, web scraping tools (Playwright, BeautifulSoup4, Selenium), and APIs (FastAPI, Requests).</li><li>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.</li><li>Developed an adaptable architecture that seamlessly integrates new models, enhancing market intelligence and banking sector analysis capabilities to support informed decision-making across departments.</li></ul>	
<b>Research Intern</b>	Jul. 2023 – Jul. 2023
<b>Department of Computer Science, City University of Hong Kong</b>   Python	Kowloon, Hong Kong
<ul style="list-style-type: none"><li>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.</li><li>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.</li><li>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.</li></ul>	

## PROJECTS

<b>ARMv8 Emulator, Assembler, and Visualiser</b>   C	May. 2024 – Jun. 2024
<ul style="list-style-type: none"><li>Engineered a cycle-accurate ARMv8 emulator and two-pass assembler in C, implementing precise memory management and robust error handling per ARMv8 specifications.</li><li>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.</li></ul>	
<b>Chess AI</b>   Kotlin	Dec. 2023 – Jan. 2024
<ul style="list-style-type: none"><li>Engineered a Kotlin-based Chess AI for a pawn race game, implementing game logic, an ASCII-based terminal GUI, move validation, and efficient AI decision-making using the minimax algorithm with alpha-beta pruning.</li></ul>	
<b>AI Research Agent</b>   Python, NoSQL	Jul. 2023 – Aug. 2023
<ul style="list-style-type: none"><li>Engineered a Python-based AI web research agent, utilising LangChain, OpenAI's LLM, and BeautifulSoup4 for web scraping and generating cited summaries, X API for automated content posting and MongoDB Atlas for secure geolocation tracking.</li><li>Developed a data visualisation pipeline for global AI agent usage, leveraging geospatial analytics to map user engagement and derive actionable insights.</li></ul>	

## TECHNICAL SKILLS

**Languages:** Native: English · Mandarin · Cantonese  
**Programming Languages:** C · Haskell · HTML/CSS · Java · Kotlin · NoSQL · Python · SQL  
**Frameworks:** Bootstrap · FastAPI · Firebase · Flask · LangChain · MongoDB · MySQL · PostgreSQL · SQLite  
**Libraries:** Matplotlib · Numpy · OpenCV · Pandas · TensorFlow  
**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