

Caleb Kan

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EDUCATION

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

Software Engineer Intern Midas Advisory Python	Aug. 2024 – Present London, United Kingdom
<ul style="list-style-type: none">Architected modular app using open-source LLMs to process financial data from web scraping (Playwright, BeautifulSoup4, Selenium) and APIs (FastAPI, Requests) for top 15 US banks. Automated manual processes, reducing data collection time by 95% and increasing accuracy by 80%.Engineered dual-model system: small LLM for 95% accurate non-operating expense filtering, large LLM (LLama 3.1) for comprehensive reporting based on given schema; implemented vector database (Milvus) with embeddings, accelerating data retrieval by 85%.Designed adaptable architecture enabling seamless integration of new models, enhancing company’s market intelligence and banking sector analysis capabilities, supporting more informed decision-making across departments.	
Research Intern Department of Computer Science, City University of Hong Kong Python	Jul. 2023 – Jul. 2023 Kowloon, Hong Kong
<ul style="list-style-type: none">Led development of GDPR compliance checker extension with distinguished professor, utilising BeautifulSoup4, LangChain, and OpenAI’s LLM for automated analysis. Achieved 85% accuracy and reduced manual review time by 75%.Designed user-friendly interface displaying website GDPR compliance status, enhancing data privacy awareness. Increased user engagement by 25% and improved compliance understanding by 60% based on user surveys.Created one-click feature for automated data erasure requests, streamlining GDPR rights exercise. Resulted in a 300% increase in successful data erasure requests.	

PROJECTS

ARMv8 Emulator, Assembler, and Visualiser C	May. 2024 – Jun. 2024
<ul style="list-style-type: none">Engineered ARMv8 architecture emulator and two-pass assembler in C, accurately simulating CPU operations and memory management per ARMv8 instruction set.Implemented efficient fetch-decode-execute pipeline, processing binary files to replicate ARMv8 behavior using advanced parsing and instruction algorithms.Developed SDL2-based GUI in C for real-time visualisation of emulator execution, featuring drag-and-drop assembly file loading and dynamic display of architecture components.	
Chess AI Kotlin	Dec. 2023 – Jan. 2024
<ul style="list-style-type: none">Engineered Chess AI in Kotlin for pawn race game, implementing game logic and ASCII-based terminal GUI.Designed user interaction system with move validation and feedback, enhancing gameplay experience.Implemented minimax algorithm with alpha-beta pruning for AI decision-making, creating an efficient and challenging opponent.	
AI Research Agent Python, NoSQL	Jul. 2023 – Aug. 2023
<ul style="list-style-type: none">Engineered AI web research agent using Python, LangChain, and OpenAI models; integrated BeautifulSoup4 for scraping and generating cited summaries.Implemented Twitter API for automated content posting and MongoDB Atlas for secure geolocation tracking, enhancing analytics capabilities.Contributed to global visualisation project, mapping AI agent usage worldwide to derive insights on geographical reach and user engagement.	

TECHNICAL SKILLS

Languages: Native: English · Mandarin · Cantonese
Programming Languages: C · Haskell · HTML/CSS · Java · Kotlin · 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 · Visual Studio Code · Xcode