

Calvin Xiang

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EDUCATION

University of Waterloo

Sept 2022 - Apr 2027

Bachelor of Mathematics

Relevant coursework: Real Analysis, Optimization, Applied Linear Models, Mathematical Statistics, OOP

EXPERIENCE

Software Engineer

Jan 2024 - Apr 2024, Sept 2024 - Dec 2024

Veryon

San Francisco, CA

- Led the development of a mobile android app with **.NET MAUI**, for offline airtracking.
- Integrated **SQLite** for reliable offline data storage, ensuring functionality in low-connectivity environments.
- Significantly reducing operational delays by developing an AI-driven chat tool using **Python** and **Streamlit**, enabling 300+ engineers to efficiently edit 10,000+ maintenance documents from **AWS S3**.
- Optimized document retrieval by **70%** with a PDF sourcing feature using **AWS Kendra** for faster access.
- Added a text-highlighting feature using **LangChain NLP**, for faster navigation of technical documents.

Software Engineer

Jan 2024 - Apr 2024

Matrix Leap

San Francisco, CA

- Designed calling agents using **Grok**, currently utilized by **Bland.ai**, to automate over **200+** business workflows with voice-to-action capabilities.
- Built a coding platform that seamlessly integrated the **Google Sheets API** to source questions, solutions, and metadata, paired with **OpenAI LLMs** to provide personalized, real-time feedback for users.
- Engineered a scalable **FastAPI**-based microservice for automated grading of coding exercises, capable of processing up to **1,000** submissions per minute while consistently maintaining a **99.8%** accuracy rate.
- Generated comprehensive weekly progress reports for users by developing a **Supabase**-backed leaderboard system to track user achievements, offer tailored learning recommendations.

Software Developer Jr.

May 2023 - Aug 2023

Equifax Canada Inc.

Toronto, ON

- Built scalable **CI/CD pipelines** with **Jenkins**, improving deployment efficiency and reducing release cycles.
- Helped with the migration **100+ TB** of client data from **IBM AS/400 Servers** to **GCP**.
- Automated data transfers using optimized **bash scripts**, reducing processing time.

PROJECTS

AI Customer Support Plugin

- Designed an AI chat widget using **React** and **Flask**, delivering prompt and efficient customer support.
- Dynamically extracts and utilizes up-to-date product and customer information with real-time data collection pipelines from **ScrapeGraphAI**, allowing for context-aware interactions.
- Integrated a vector database using **PineconeDB** to store and retrieve semantic data efficiently, reducing query latency and enhancing response accuracy.

Memora: Spaced Repetition Flashcard App

- Developed a **cross-platform mobile app** with **Flutter** to optimize vocabulary retention using a **custom algorithm** that adjusts content based on user performance metrics like accuracy, response time, hint usage.
- Redesigned the **SM2 spaced repetition algorithm** to incorporate performance analytics, enabling dynamic interval scaling to prioritize challenging words while reducing redundant ones.
- Added a feature leveraging **NLP (spaCy)** to auto-generate example sentences.
- Crafted a visual analytics dashboard to display retention trends, mastery milestones, and weak points.

TECHNICAL

Languages: Python, Java, C, C++, JavaScript, TypeScript, Go, Dart, SQL, HTML/CSS

Frameworks & Libraries: React, Node.js, Next.js, FastAPI, Streamlit, .NET MAUI, **LangChain**

Tools & Platforms: AWS/GCP, Docker/Kubernetes, Jenkins, Git, Supabase/SQLite, Jenkins, Postman, Bash

AI/ML: OpenAI, Grok, Anthropic, Llama3, HuggingFace, spaCy, **PineconeDB**, AWS SageMaker

CERTIFICATIONS

Oracle Certified Java Programmer

Sept 2023

Carnegie Mellon PicoCTF Second Place

Mar 2022