Kevin Wei

EDUCATION

University of Waterloo   Waterloo, ON
Major in Computer Engineering | GPA: 4.0 - Dean's Honour List   *Sep 2022 – Apr 2027*
Relevant Courses: Data Structures and Algorithms, Concurrency, Object-Oriented Programming

SKILLS

Languages: Python, Java, C, C++, JavaScript, TypeScript, SQL
Frameworks/Libraries: Flask, FastAPI, Pandas, PyMongo, PyTorch, Spring Boot, React.js, Next.js, Node.js, Vue.js
Technologies: AWS, GCP, Azure, Kafka, PostgreSQL, MySQL, MongoDB, Terraform, Kubernetes, Docker, Selenium

WORK EXPERIENCE

AI Backend Developer   Jan 2025 - Apr 2025
Intact Financial | Python, Flask, AWS, Kafka, Kubernetes, Tensorflow, Docker   *Toronto, ON*
- Architected a **Kafka-based microservice** orchestrating multi-layered extraction and **classification models** for routing claim documents, eliminating manual screening time by **20+ minutes** per document.
- Designed a robust document extraction system with **AWS** services including **Textract, SQS/SNS, DynamoDB, and S3**, processing over **5,000+** insurance claim documents daily with ensured data persistence.
- Developed an **AI system** that sources from business requirements, design documents, and meeting transcripts to create Jira tickets, reducing turnaround time by **70%**.
- Integrated NLP techniques such as **N-grams** and **fuzzy matching** to boost claim documents classification **accuracy by 9%** over legacy image-based models, cutting inference resource **cost by 80%**.

Software Developer, ML   May 2024 - Aug 2024
Chartd | Python, FastAPI, PyTorch, Pandas, AWS, Azure, Docker   *Ottawa, ON*
- Architected a **low-latency API pipeline** for real-time text processing, interpreting user instructions to trigger app functionalities, integrating sentiment analysis and RAG, and achieving **sub-2 second** response times.
- Developed a scalable infrastructure built on **AWS** for end-to-end model training and deployment, leveraging **SageMaker, S3, and ECR** to streamline data processing pipelines and reduce deployment time by **40%**.
- Delivered a custom data generation platform capable of producing datasets of up to **10 million** entries with dynamically adjustable input parameters, accelerating data preparation by up to **60%**.

Full Stack Developer   Sep 2023 - Dec 2023
Chartd | Python, MongoDB, FastAPI, Pandas, Vue.js, TypeScript, Docker   *Ottawa, ON*
- Developed a Business Intelligence platform leveraging NLP models to analyze complex financial data.
- Implemented an ETL **data pipeline** for data transfers into MongoDB, achieving **sub-3 second** latency.
- Configured a router with **4 asynchronous endpoints** in FastAPI to batch process **10,000+ data nodes**.
- Enforced robust data governance by designing **Pydantic models** used by the language models for inference.

Web Application Developer   Jan 2023 - Apr 2023
Chartd | Vue.js, Nuxt.js, TypeScript, HTML, Cypress   *Ottawa, ON*
- Developed Track Offsets, a financial management tool, abstracting data from JSON to TypeScript.
- Implemented CRUD interfaces used in **over 50 instances** within the app, using Cypress for **E2E Testing**.

PROJECTS

ExpenseLink | *Python, React.js, Flask, JavaScript, Pandas, Google Cloud Platform (GCP)*
- Developed a mobile-friendly expense tracking app with React.js and Flask, along with integration of **Google Cloud Platform** and **Google Sheets**.
- Integrated persistant Google Login through Flask API with **OAuth 2.0 credentials**, using **stateless token-based authentication** with **HS256** encrypted tokens stored as JWTs in **Cookies**.
- Utilised Pandas to format and aggregate **thousands of transaction** data points, and employed Axios to transmit data via HTTP requests to the app's backend API service.

AI Vlog Platform | *Python, Flask, TypeScript, AWS, GCP*
- Built an **AI-driven** video editing platform, integrating **ShotStack API** for advanced editing capabilities.
- Utilised **AWS S3** for video storage and **Google Gemini** for automated video analysis and edit sequence generation.