Kevin Wei

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EDUCATION

University of Waterloo   Waterloo, ON

Major in Computer Engineering | GPA: 4.0 - Dean's Honour List   *Sep 2022 – Apr 2026*

Relevant Courses: Data Structures and Algorithms, Concurrency, Object-Oriented Programming

SKILLS

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

WORK EXPERIENCE

ML Engineer   May 2024 - Aug 2024

Chartd | PyTorch, AWS, Pandas, JupyterLab, Hugging Face   *Ottawa, ON*

- Developed and fine-tuned Google **Flan-T5**, Meta **Llama** and other LLMs with PyTorch to optimize NLP tasks for Business Intelligence, boosting classification accuracy by **17%** and summarization ROUGE scores by **19%**.
- Leveraged **AWS SageMaker, S3 and ECR** to streamline model training and data control, achieving a **40% reduction** in overall training and deployment time.
- Generated comprehensive training data by extracting custom data queries from natural language inputs, and integrating Hugging Face models and datasets to accelerate preprocessing time by up to **50%**.
- Deployed OpenAI models using **Azure** API Management, enhancing the platform's reporting system with automatic data analysis and insight generation.

Full Stack Developer   Sep 2023 - Dec 2023

Chartd | Python, MongoDB, Pandas, Vue.js, Typescript, Docker   *Ottawa, ON*

- Contributed to a Business Intelligence platform leveraging NLP models to analyze complex financial data.
- Implemented an ETL **data pipeline** with Python for seamless 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**.
- Designed a Data Management page with TypeScript and Vue.js, letting users customize data transformations.
- 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, JSON, HTML, SCSS, Cypress   *Ottawa, ON*

- Developed Track Offsets, a financial management tool in Vue.js, supporting the evaluation of multi-million dollar **R&D contracts**.
- Abstracted financial data from JSON to TypeScript for **dynamic visualization** in tables, graphs, and charts.
- Implemented CRUD interfaces used in **over 50 instances** within the app, using Cypress for **E2E Testing**.

PROJECTS

Expense Tracker | *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 with **OAuth 2.0 credential authentication** by verifying tokens with Google Authorization Servers and storing them securely 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.
- Designed a RESTful Flask API with **stateless token-based authentication** using JSON Web Tokens (JWT) containing **HS256 encryptions**.

E-Commerce Shop | *Java, H2, JSP, Spring Boot, Spring MVC, Hibernate, Maven*

- Built an e-commerce platform with Java, JSP, and Spring Boot, facilitating swift transactions for items.
- Configured a scalable database solution with **H2 Database Engine**, efficiently storing user info and items through advanced HQL queries.
- Applied the **MVC architectural pattern** with Spring MVC to enhance application structure, improving organization and maintainability.