Bijon Setyawan Raya

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Technical Skills

Languages: C/C++, Python, JavaScript/TypeScript.
Web Development: Django, FastAPI, Next.js.
Deep Learning & Machine Learning: Horovod, Keras, PySpark, PyTorch, TensorFlow, Numpy, Pandas, Scipy, Scikit Learn.
Database: ElasticSearch, MySQL, SQLite.
Utilities: Docker, Kubernetes, Git, Linux/Unix.

Experience

Intermediate Fullstack Developer October 2022 – March 2024
Faria Education Group *Taipei, Taiwan*

- Optimized file export processes, achieving a significant reduction in export time by 98.33%.
- Sped up user feed search processes using ElasticSearch and efficient SQL queries.
- Enhanced search precision and user navigation within user feeds by expanding options in the feed search navigation modal, significantly improving user experience and content discovery.
- Consistently managed and ensured data integrity across all tables within the MySQL database.
- Refactored the jQuery codebase and converted some into Stimulus.js and Vue.js.

Graduate Research Scientist February 2021 – January 2023
National Tsing Hua University *Hsinchu, Taiwan*

Teaching Assistant Sep. 2020 – January 2023
National Tsing Hua University *Hsinchu, Taiwan*

Education

National Tsing Hua University Hsinchu, Taiwan
Master of Science in Computer Science *Feb. 2021 – Jan. 2023*

National Tsing Hua University Hsinchu, Taiwan
Bachelor of Science in Computer Science *Sep. 2015 – Jan. 2021*

Projects

Personalized Retrieval-Augmented Generation System | *Gradio, Llama 3, Llama Index, Ollama, and Python.*

- Created a personalized, local RAG that refines my resume based on hundreds of analyzed job descriptions, providing insights on the current job market.
- Designed and implemented an intuitive UI utilizing Gradio, empowering users to input queries and exert control over response retrieval and document access.

Image Search Engine | *FastAPI, Jinja, Python, PyTorch, and SQLite.*

- Streamlines uploading image processes, applying advanced computer vision techniques (ResNet18) to identify and retrieve similar images based on visual features.
- Designed and implemented a simple UI using FastAPI and Jinja, allowing users to upload images and see similar uploaded images.

Music Recommendation System | *Numpy, Pandas, Python, and scikit-learn.*

- Utilizing Spotify's vast music library, extracted and processed audio features from over 2000 songs across various genres, then applied Non-negative Matrix Factorization to recommend personalized song selections.

AI Coding Assistant | *Llama 3, Ollama, and Python WASM.*

- Allows users to program and run Python code directly in their browser, with the added benefit of getting assistance from a LLM running in the background to help with coding tasks, debugging, and more.

Schedulearn | *Docker, FastAPI, Horovod, Python, and SQLite.*

- A Deep Learning scheduling system that dynamically scales to optimize training resource utilization.
- Reduced overall makespan and turnaround time by 10-50%, the codebase size by 50% and requirement utilization by 70% compared to the previous implementation.