Daniel Yu

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OBJECTIVE: Master of Computer Science student at WPI with 1+ years of machine learning and software development experience seeking Machine Learning Engineer or Software Engineer opportunities.

EDUCATION

Computer Science — Masters

August 2023 - Present

Worcester Polytechnic Institute

GPA: 4.00

Mathematical Sciences — Bachelor of Science

August 2018 - June 2022

University of California, Santa Barbara

EXPERIENCE

CVTE — Machine Learning Engineer Intern

May 2024 - July 2024

- Developed and implemented logic enhancements for a machine learning model utilized in over 5 million classrooms, improving the generated classroom analysis by 20%
- Used Python, Matplotlib, and Pyplot to process 1000s of classroom data to analyze and identify dips in classroom activity level
- Collaborated in an Agile/Scrum team of 8 engineers to deliver new large language model implementations every 2 weeks

ReadMKT — Software Engineer

August 2022 - August 2023

- Developed a rich text editor in Javascript enabling users to edit content, images, links, and other components
- Built an infinite scrolling feature on the main page, dynamically displaying up to 10 posts at a time and loading more groups of 10 as users scroll to the bottom
- Implemented a rate limit management strategy to ensure complete API data fetching from financial data providers
- Used MongoDB to store, update, and retrieve user information, trade details, etc
- Deployed product to AWS Lambda and Cloudfront supporting dual endpoints IPv4 and IPv6

7G BioVentures — Full Stack Developer Intern

May 2022 - August 2022

- Implemented an internal system to manage investment project information, boosting employee productivity by 50%
- Built a user-friendly, interactive, and component-based system using React and Express
- Used MongoDB to manage data storage and retrieval

Projects

Research Project — ASSIST ments

May 2024 - Present

- Fine-tuned large language models using QLoRA to enhance the accuracy of feedback for student responses to math questions
- Trained models using **TensorFlow** on millions of student response data to develop and implement effective improvement strategies for student feedback
- \bullet Implemented vector database using **FAISS** to generate feedback and score for studend responses with retrieval augmented generation, improving large language model generated content accuracy by 30%

Personal Project — Motion Wiz

December 2023 - January 2024

- Developed backend with Python which uses OpenAI large language model to generate exercises based on user queries
- Hosted on AWS to get the API endpoint
- Leveraged Next.js for the interactive interface and stylized with Tailwind CSS
- Hosted frontend on Vercel for public access

SKILLS

- Languages: Python, JavaScript, Typescript, Java, HTML, CSS, SQL, C++, Rust
- Environment/Framework: Pytorch, TensorFlow, Numpy, Pandas, React, Next.js, AWS, Express, FastAPI
- Databases: MongoDB, MySQL, SQLite3
- AI/ML Techniques: Large Language Models, Fine-tuning, Retrieval Augmented Generation (RAG), Natural Language Processing (NLP), Computer Vision (CV), Prompt Engineering