

Huanmi TAN

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Education

Carnegie Mellon University, School of Computer Science

Master of Software Engineering, Scalable Systems

Pittsburgh, PA

Aug 2023–Dec 2024

Tongji University, School of Software Engineering

Bachelor of Engineering in Software Engineering, Overall GPA: 90/100

Shanghai, China

Sep 2019–July 2023

Professional Experience

ByteDance

PM Intern / Volcano Machine Translation, NLP, AI Lab

Shanghai, China

March 2023–Aug 2023

- Developed a full-stack web application from scratch for quality assessment of translation engines. Integrated BLEU and deployed COMET model to automate the evaluation the quality of translation engines with multiple metrics.
- Spearheaded iteration of "VolcTrans 2.4.0", introducing domain translation and personal glossary functions. Facilitated smooth cross-functional collaboration among developers, designers, testers. This version was already launched on Chrome plugin store in August.
- Analyzed previous data from event trackings to drive feature optimization. Modified and validated new behavior tracking points for future enhancements.
- Contributed to the first LLM product at ByteDance, Douyin Xiaolan Caring bot. Generated supervised fine tuning data and reviewed SFT data and prompts in daily scrum meetings.

Shanghai AI Laboratory

Research Intern / Neuromorphic Computing, AI for Imaging Group

Shanghai, China

Nov 2022–Feb 2023

- Improved neural network robustness on memristors using Bayes optimization technique. Conducted experiments to pinpoint key determinants for model resilience.
- Designed and coded an algorithm to automatically adjust dropout rates in sync with each Bayes optimization iteration, countering the challenge of memristor weight drifting.
- Benchmarked and validated the algorithm across 10 network architectures under varying Gaussian noise levels to simulate memristor weight drifting. outperforming four baselines in terms of efficiency and accuracy across an extensive range of sigma values.

Technical Skills

Programming Languages: Python, C++/C, R, SQL, Swift, Java, HTML/CSS, Java Script

Frameworks: Flask, Django, Django Rest Framework, Vue, React, PyTorch, CUDA, TensorFlow

Others: Git, Slurm, Unix/Linux, LaTeX, Google Cloud Platform, cmake, Anaconda, Docker, Jenkins, ELK/EFK

Selected Projects

[NLP, AIOps] Developed part of an AIOps solution that bolstered fault detection and diagnostic analysis by identifying logs from various devices. Experimented with different X2Vec models and deployed **BERT** using "Bert as a Service" on the server. Improved the classifier accuracy from 0.91 to **0.99** and built a web platform for log classification operations like Elasticsearch. These improvements helped with the parsing process of downstream modules.

[Backend, DRF] Built a platform to evaluate carbon credits from daily behavior to aid Citibank's loan quotas. Led the technology team and backend developers to use Django Rest Framework to write restful APIs and refine the interaction methods, including voice assistant, and image search function. Served as project manager, organized meetings, reviewed code, and conducted integration testing. Won second prize in Citi Cup, ranking top 5 in China. Developed skills in backend development, project management, and team leadership.

[Microservices, Flask] Utilized microservices to rearchitect the monolithic TJOJ, our university's online judging website. Optimized the comment section for problem solution, supporting markdown syntax and LaTeX for formulas. Decoupled various microservices, improving TJOJ's scalability and maintainability. Refined the architecture via Flask framework, making it easier to add new microservices and features. According to a survey, 94% of students reported improved performance, and 89% said the website was easier to use after the rearchitecting.

[Data Mining] During NCSU GEARS, evaluated and mitigated biases in educational data mining to avoid detrimental potentials. Applied traditional machine learning algorithms and deep learning models on open educational datasets to predict students' successes. Designed a metric to measure discrimination on sensitive attributes and compared each model's fairness. Determined the model with low bias and high accuracy and validated that it worked well on a different dataset.

Awards

- Second Prize of Citi Cup (Fintech Innovation Application Competition)

May 2022

- National Third Prize of Mobile Application Innovation Competition of China Collegiate Computing Contest

Dec 2022