

# MEI YI YANG

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## Education

### University of Michigan

*Bachelor of Science and Engineering in Computer Science*

Ann Arbor, MI

August 2023 – May 2027

- **Relevant Coursework:** Data Structures and Algorithms, Web Systems, Database Management Systems, Computer Organization, Discrete Math, Statistics and Data Analytics, Linear Algebra

## Experience

### AI Engineering Intern

*NetEase YouDao – R&D Team*

Beijing, China

May 2025 – Present

*Technologies: PyTorch, Transformers/Hugging Face, Python, GPT-4/LLM APIs, CUDA, Pandas/NumPy*

- Spearheaded novel machine translation quality estimation research for low-resource language pairs (Tibetan-Chinese), implementing state-of-the-art evaluation metrics (COMET, chrF++, BERTScore, NLLB-200) to systematically assess translation quality across 1,000+ sentence pairs, establishing baseline performance benchmarks for under-researched language combinations
- Architected LLM-powered automated evaluation system leveraging GPT-4, Deepseek-v3, Qwen, etc. models to generate human-aligned translation rankings, achieving 65-83% correlation with expert annotations and reducing manual evaluation time by 90% through optimized prompt engineering and comparative scoring methodologies
- Pioneered statistical validation framework employing correlation analysis (Pearson, Spearman, Kendall's tau and error metrics (MAE/MSE) to benchmark automated MT evaluation against human expert judgments, implementing distinct normalization algorithms that improved score reliability and enabled the team to identify translation model performance gaps with 75% accuracy

### Frontend Research Assistant

*Jordan Shavit's Lab*

Ann Arbor, MI

February 2025 – June 2025

*Technologies: React, JavaScript, HTML, CSS, GitHub Pages*

- Developed React-based web application for zebrafish thrombosis image analysis, deployed on GitHub Pages for collaborative research access across multiple academic institutions
- Revamped user experience with intuitive drag-and-drop interface, streamlining image upload workflow and reducing researcher onboarding time by 40%
- Implemented advanced image processing features with customizable analysis parameters, enabling researchers to fine-tune detection algorithms for various thrombosis patterns and experimental conditions

### Operations Team Intern

*Tencent Cloud – CSIG Cloud Product Department*

Shenzhen, China

May 2024 – July 2024

*Technologies: Python, Tencent HunYuan AI API, SQL*

- Conducted thorough analysis of profit trends to devise strategies for maximizing gross profit in international cloud products: Cloud Virtual Machines (CVM), Lighthouse, GPU, Baremetal, etc. and raise any negative profit margins to at least 0% breaking even
- Engaged with clients and outsourcing businesses to develop customized purchasing models, ensuring alignment with business needs
- Analyzed and benchmarked Tencent's position against major competitors in international markets to identify and create sales advantages, such as offering equivalent or superior product models at 5-10% lower prices
- Implemented Tencent HunYuan AI chat bot API for the internal team in order to offset manual calculation workload and improve time efficiency by 80%

## Projects

### MapReduce Library | *Python, Distributed Systems*

- Built fault-tolerant distributed computing framework implementing Hadoop-like MapReduce paradigm with automatic load balancing and failure recovery
- Implemented Manager-Worker architecture with TCP/IP communication and OS-level synchronization, achieving linear scalability across cluster nodes

### Stock Market Simulator | *C, C++*

- Implemented real-time stock exchange simulation using STL priority queues with price-time priority and  $O(\log n)$  order matching
- Developed algorithms for live market metrics, median price computation, and trade analysis with object-oriented architecture

### Piazza Classifier | *C, C++*

- Developed NLP-based classification system analyzing student forum posts with 87.08% accuracy using log-likelihood computation
- Implemented machine learning algorithms with CSV data processing and statistical analysis for automated content categorization

## Skills

**Languages:** C++, Python, Java, JavaScript, HTML, CSS, MATLAB

**Technologies:** Git, Bash, Flask, Jinja2, PyTorch, BERT, NumPy, SQL, Pandas, Linux, GDB

**Interests:** Dance, League of Legends, Snowboarding