Jingyuan Zhu

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Education

University of Michigan, Ann Arbor, MI
Ph.D in Computer Science — Sep 2019 – Present

University of Michigan, Ann Arbor, MI — GPA: 3.9/4.0
B.S.E in Computer Science (Dual Degree) — Sep 2017 – Apr 2019

Shanghai JiaoTong University, Shanghai, China — GPA: 3.6/4.0
B.S.E in Electrical & Computer Engineering (Dual Degree) — Sep 2015 – Aug 2019

Experience

Meta — Menlo Park, CA
Software Engineer Intern — *May-Aug 2024*

LLM Runtime Benchmark Framework

- Built a benchmark framework to measure the performance across various components of Llama's inference runtime under different configurations (e.g. parallelism, disaggregation).
- Integrated the benchmark into Meta's CI/CT pipeline, enabling early detection of 1 actual real-world performance regression triggered by specific code changes.
- Leveraged the benchmark framework for detailed performance analysis, identifying runtime bottlenecks instructed by theoretical analysis.

Google — Seattle, WA
Software Engineer Intern — *May-Aug 2023*

Critical Path Aggregation and Visualization for Chrome

- Derived and implemented a novel algorithm to aggregate critical paths for Chrome page navigation traces. Implemented a clear and informative interactive visualization using D3.
- Designed and developed a "what-if" analysis method for Chrome, offering an actionable estimation to pinpoint high-value optimization opportunities.
- Applied the aggregation on hundreds of Chrome traces, identifying speedup potential for 1,000+ tasks and aiding optimization prioritization.

University of Michigan — Ann Arbor, MI
Graduate Student Research Assistant — *May 2020 - Present*

Reviving Dead Links on the Web with FABLE

- Designed and built FABLE: a system automatically locate the reorganized URLs of inaccessible ones.
- Achieved great efficiency (reduced live web page crawls by 95%), with good coverage (outperformed existing solutions by 50%) and accuracy ($\geq$90%).

University of Michigan — Ann Arbor, MI
Graduate Student Instructor — *Jan - Apr, Sep - Dec 2021*

- EECS 491: Distributed Systems. Instructed lab sections and collaborated on the creation and grading of exams.

Selected Publications

Sprinter: Speeding Up High-Fidelity Crawling of the Modern Web [NSDI'24]

Reviving Dead Links on the Web with FABLE [IMC'23]

Jawa: Web Archival in the Era of JavaScript [OSDI'22]

Cloud Video Transcoding Performance Characterization [IEEE IISWC'20]

Skills

Languages: Python, C/C++, JavaScript, Golang, SQL(MySQL)/NoSQL(MongoDB), HTML/CSS
Frameworks & Tools: Chrome Devtools Protocol, FFmpeg, LLVM, React, Docker, git, LaTeX, PyTorch, RDMA verbs

Coursework

Web Systems, Operating Systems, Distributed Systems, Computer Networks, Databases, Compilers, Mobile App Design, Machine Learning, Systems for Machine Learning