Jingyuan Zhu

734-353-1898 | jingyz@umich.edu | github.com/JingyZhu

Objective

I'm looking for a software engineering internship in 2024 summer, in order to gain and improve my practical skills. I seek to apply for positions that are generally suitable for my research background in network systems.

Education

University of Michigan, Ann Arbor, MI — GPA: 3.8/4.0
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

Google — Seattle, WA
Software Engineering 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

- Identified that numerous URLs become inaccessible due to page reorganization rather than deletion.
- Developed and implemented 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 (To be appeared)]
Reviving Dead Links on the Web with FABLE [IMC'23]
Jawa: Web Archival in the Era of JavaScript [OSDI'22]
Characterizing "Permanently Dead" Links on Wikipedia [IMC'22]
Cloud Video Transcoding Performance Characterization [IEEE IISWC'20]

Projects

Low Latency Live Streaming: An FFmpeg-based tool leverages Intel's VAAPI, achieving ultra-low latency (30ms).
BuildIT: Mobile app for furniture assembly using AR technology. Developed in Django, MySQL and React-Native.

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