Wenhao Su

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◇ Self-motivated Software Engineer with a demonstrated history of distributed system infrastructure and full-stack development. My strengths reside in building client-server applications, multithreaded programming and web-app dev ◇ with Agile practices. I'm skilled in reading and debugging open source projects with a high-volume codebase.

EDUCATION

University of Illinois at Urbana-Champaign   Champaign, IL
Professional Master of Computer Science, GPA: 3.95/4.00   *Aug. 2019 - Dec. 2020*
Courses: Distributed Systems, Advanced Social & Information Networks, Software Engineering, Algorithms

University of Michigan, Ann Arbor   Ann Arbor, MI
Bachelor of Science in Engineering in Computer Science, GPA: 3.91/4.00   *Aug. 2017 - May. 2019*
Courses: Web Systems, Database Management Systems, Operating Systems, Computer Vision, User Interface Development

Shanghai Jiao Tong University   Shanghai, China
Bachelor of Science in Engineering in Electrical and Computer Engineering   *Aug. 2015 - Aug. 2019*

TECHNICAL SKILLS

Focus:	Distributed System, Full-stack, Backend
Programming Languages:	C, C++, Python, JavaScript, Java, Shell, SQL, C#, HTML, Haskell, MATLAB
Frameworks & Tools:	**Web:** React, Node.js, Flask, MySQL, MongoDB, WebGL, Bootstrap, D3.js, Angular, jQuery
	Tools: AWS, GCP, Docker, Kubernetes, Nginx, Hadoop, Jenkins, Travis CI

WORK EXPERIENCE

Software Engineer Intern, Runtime Verification, *Champaign, IL*   *May. 2020 – Present*

- Refined Blackbox testing tool using Python for Firefly, a **SaaS** application aimed at formally verifying Smart Contracts for **Ethereum blockchain**, to enable **automatic testcase generation**, which can improve code coverage by 40% on average.
- Expanded Firefly server's compatibility to support **client-server communication** with OpenZeppelin Node.js module, an open source smart contract library, via Ethereum **JSON remote procedure call**.
- Benchmarked RV-Match, an **automatic runtime debugger tool** for **C** programs on open-source **GNU Coreutils** projects.

Co-Founder and Mobile App Developer, **AuraMaze.org**, *Ann Arbor, MI*   *Aug. 2018 – May. 2019*

- Created a museum guiding app supporting 3000+ museums and 140,000+ artworks, with which users can identify paintings with camera, listen to audio introductions, write reviews for favorite artworks and get personalized recommendations.
- Integrated Text-to-Speech conversion model, real-time camera-captured photo transmission, location-based museum recommendation system, user authentication and social network into **React Native** mobile frontend interface.
- Utilized **Travis** for CI testing, **Coveralls** for coverage report and **AWS CodeDeploy** for automated deployment.
- Published iOS mobile app on App Store via **Expo toolchain** with 300+ downloads and 5-star rating.

PROJECT HIGHLIGHTS

MapleJuice Cloud Computing, *University of Illinois at Urbana-Champaign*   *Sept. 2019 – Dec. 2019*

- Built a cloud computing framework similar to **MapReduce** in C++, which performs 20% faster than Hadoop on small dataset.
- Developed a scalable **distributed file system** supporting get, put, delete operations with replica control.
- Utilized heart-beating failure detection to maintain a dynamic **P2P** membership list with high-reliability fault tolerance.
- Implemented a distributed log querier to fetch information from log files stored on multiple machines for efficient debugging.

Network File Server, *University of Michigan*   *Mar. 2018 – Apr. 2018*

- Implemented a secure network file server based on hierarchical file systems through **socket programming** in C++.
- Utilized **multithreaded** programming to support concurrent file manipulation requests from multiple clients.

Wikipedia Search Engine, *Project Leader, University of Michigan*   *Mar. 2018 – Apr. 2018*

- Led a three-person team to build an end-to-end scalable **search engine** supporting user-driven scoring written in Python.
- Set up an index server running **RESTful API** for information retrieval based on TF-IDF and PageRank scores.
- Designed a **React** driven user interface for the search engine and deployed to **Amazon EC2**.