

Shawn Zhong

Ph.D. Student



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Education

University of Wisconsin-Madison
2017 - 2020 | CS & Math | GPA 4.0
Dean's List | ACM-ICPC Team Staff

CS courses: Big Data, AI, ML, DB, OS,
Network, Algorithm, Compiler, HPC,
Security, Bioinformatics

Note-taker for Mathematical Analysis,
Numerical Analysis, Abstract Algebra,
Linear Algebra, Stochastic Process,
Discrete Math, Probability

Awards

2017 ACM-ICPC #22 out of 208
teams in NCNA Region (Team: Rocky)

2018 ACM-ICPC #9 out of 209 teams
in NCNA Region (Team: int main())

2019 ACM-ICPC #7 out of 180 teams
in NCNA Region (Team: int main())

CS Golden Brick Award (link)

Skills

Java

Python

C/C++

HTML, CSS, Bootstrap

JavaScript (ES6+), React, Redux

Node.js, Express.js

SQL Database (Postgres & MySQL)

PyTorch, TensorFlow/Keras, NumPy

Other: Docker, Spark, Hadoop, GCP,
AWS, \LaTeX , MATLAB, Mathematica

Work Experience and Internships

- Summer'19 **Intern at an AI-Based Conversational Analytics Company** [DataChat](#)
- Refactored the back-end visualization module by chart types
 - Simplified queries when gathering statistics about a table
 - Developed recommendation engine to predict the next utterance
 - Implemented link in conversation to execute suggested utterance
 - Allowed users to generate PDF magazine for current session
 - Added state-full hot reload to the front end using Webpack HMR
- Summer'18 **Full Stack Developer at a Student Startup** [Buddy Career \(Closed\)](#)
- Developed a mentor-mentee pairing web app with React & Node
 - Implemented user profile page, comment box, and password reset
 - Added search, filter, and pagination to mentor list
 - Integrate Redux to the front-end for state management
 - Refactored back-end to use async/await & centralize error handling

Personal Projects

- May-Jun'19 **JsSpim: An Online MIPS32 Simulator** [Website](#) | [GitHub](#)
- A simulator that supports the entire MIPS32 instruction set
 - Support breakpoints, custom execution speed, ASCII memory view, highlight on changed registers/memory, syntax highlighting, etc.
 - Use WebAssembly for the simulator logic for optimal performance
 - Use vanilla JavaScript for other logic, and Bootstrap for layout
- May-Jun'19 **xv6 File System Visualizer** [Website](#) | [GitHub](#)
- An online visualizer for xv6 file system image written in vanilla JS
 - Allow users to view all files, inodes & blocks, and trace their relation
 - Implemented basic support for file system consistency check
- Dec'18 **MadCourse: UW-Madison Course Monitor** [Chrome Web Store](#) | [GitHub](#)
- A Chrome extension to check course status for UW-Madison
 - Send a notification when there is a change in section status
 - Integrated with RateMyProfessor and MadGrades
- Nov'18 **Badger Map (Hackathon Project)** [Devpost](#) | [GitHub](#)
- An iOS app that helps students navigate in the campus using AR
 - Use augmented reality to show the position of campus buildings
 - Provide road navigation to certain building via map view

Research

- May'19-Now **Filesystem as a Process (Research project with a Ph.D.)**
- Run fs entirely in userspace to avoid the overhead of syscalls
- Fall'19 **Comparative Analysis of Stream Processing Systems** [Paper](#) | [Poster](#)
- Benchmark different stream processing systems
 - Analyze how different computation models affect latency, throughput, elasticity, scalability, and fault tolerance.

Extra-Curricular

- Fall'19 **Peer Mentor for the Operations System Class** [Tutorials](#)
- Write tutorials on IDE settings, sanitizer, profiler, etc.
 - Answer questions on Piazza (a Q&A forum)
 - Hold lab hours to help students with assignments
- Spring'18 **Technical Team Leader at Badger Mentorship** [Website](#)
- Developed a website for the student organization
 - Originally hosted on AWS. Migrated to GCP inside Docker container
 - Deployed a mail server for newsletters and announcements
- Oct'18 **Mentor & Grader at AoCMM** [Website](#)
- Reviewed and graded 2018 AoCMM Math Modeling Competition