Shaokang Jiang

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EDUCATION

University of California San Diego — La Jolla, CA

M.S. in Computer Science and Engineering, 2022-2024 (expected)

Planned Thesis: "Usability analysis of autocomplete," Advised by Michael Coblenz

University of Wisconsin-Madison — Madison, WI

B.S. in Computer Science, GPA: 4.00/4.00, Graduated 2021 with distinction in the major

SKILLS

- **Coding:** Java, Python, Rust, C, React, Expo(React Native), C++, C#, HTML/CSS/Javascript, Typescript, Matlab, Jsp, Git, LaTeX, GAMS, Markdown, Haskell, Svelte, ejs
- **Technologies/Environment:** Windows, Linux, SQL, Github, Cloudflare (Worker and KV), Electron, PyTorch, TensorFlow, VSCode, socket.io, Azure, JIRA, Trello, DevOps, Agility, JMP, Docker, Chrome, Tampermonkey

PROJECTS

See full list of projects on shaokang.me/projects/ or on my Github

Workshop Manager (Electron/React, 2024)
- Designed and built a 4-component workshop manager for real-time user engagement with Worker, GPTs, Socket, HTTPS, and DDNS.

HealthCare Chatbot (Expo/Worker/Github, 2024)
- Led a group of five people to create a ChatBot with CI/CD pipelines, integrating design principles, Jest testing, and Agile.

Interactive Haskell Game (Haskell, 2023)
- Using the Brick library in Haskell to design and build a simple game for Conway's Game of Life.

Eyetracker Monitoring Platform (C#/JS, 2023)
- A monitoring platform for tracking VSCode development process, integrating Tobii eye tracker 5, for my project.

Wise grader (Javascript/TensorFlow, 2021)
- A program aids quicker grading by suggesting scores based on length, N-gram analysis, and topic relevance for dictation questions.

Covid data report (Node.js, 2021)
- Automatically scrape covid data from various official sites and pushed filtered results to subscribed users

A Financial Web App (HTML/ejs/Worker, 2020)
- Led a team to create a financial education website with tools like a yearly budgeting tool for Capital One, using Agile.

Financial Organization App (Expo/NLP.js, 2020)
- An app to organize expense and income with voice interaction on locally NLU for Capital One

Energy Simulator (HTML/WebGL/JS/Java, 2020)
- Decision-making by solving linear problem and simulating energy running website/Java GUI with 3D representation

A JavaFx program (Java, 2020)
- A Java GUI program to manage and lookup some data among different farm

AutoCommenter (Java, 2019)
- Automatically analyze java code and add comments to Java source code based on preset rules

HateFate Website (HTML/Jsp/SQL, 2017)
- Led a four-person team to develop a website with core features including login, signup with email verification, and user pairing.

EXPERIENCE

Teaching Assistant — University of California San Diego — Jan 2024–now

- Ta worked with Sam Lau for Introduction for Data Visualization (DSC 106) for one quarter. And Sole Ta worked with Yufei Ding for Compilers (CSE 131) for one quarter

– Working on infrastructure and logistics management. Had discussions with the professor about the course content, designing, polishing, and grading homework, holding office hours and discussion sections, and engaging students in discussions.

Teaching Assistant — University of California San Diego   Sept 2023–Dec 2023

– Sole Ta worked with Michael Coblenz for the usability of the programming language course (CSE291) for one quarter.
– Had discussions with the professor about the content of this course, graded assignments, hosted some discussions during the main lecture covering specific course content, and provided personalized advice to individual students.
– Offered guidance on group projects covering a variety of topics in the usability of programming language or software engineering. Conducted office hours to assist students and mined for insights while discussing with them.

Graduate student researcher — University of California San Diego   Jan 2023–Sept 2023

– Worked with Michael Coblenz on the usability analysis of autocomplete.
– Designed and executed an experiment with 32 participants using an eye tracker to evaluate the costs and benefits of IDE-based autocomplete features to programmers who use an unfamiliar API; analyzed data using JMP; and wrote a paper for the study.
– Found that participants who used autocomplete learned more about the API while spending less time reading the documentation; found autocomplete did not significantly reduce the number of keystrokes required to finish tasks.
– Acquired fundamental skills in conducting empirical research studies and learned various methods for handling and understanding the implications of eye-tracking data.

Teaching Assistant — University of California San Diego   Jan 2023–Jun 2023

– Major Ta worked with Soohyun Liao for Java and data structure courses (DSC30) for two quarters.
– Proposed, designed, and developed entirely new and innovative assignments and projects for the entire course, most of which had never been used elsewhere, in collaboration with the professor. Graded students' assignments. Collaborated with team members to discuss and refine the content of the course.
– Held office hours and conducted all discussion sections to assist students in gaining a deeper understanding of the course topics. Taught some additional but not required concepts during discussion sections.

Volunteer Tutor — University of Wisconsin-Madison   Jan 2021–May 2021

– Help students with their coursework related to computer science at computer science learning center.

Teaching Assistant — Illinois Institute of Technology   Aug 2018–May 2019

– Instructed students in lab sessions of Java courses and held office hours to help students best understand class content
– Checked their homework regularly and had discussions with the professor and collaborated with team members about ways to improve this course and solve the major problems of students.

Student Assistant — Illinois Institute of Technology   Jan 2019–May 2019

– Tutoring students with their coursework related to computer science in the university's academic resource center

Research Assistant — Illinois Institute of Technology   Jan 2019–May 2019

– Modified POW (Bitcoin) and POS (EOSIO) blockchain source code for execution on a blockchain emulator, facilitating performance measurement for researchers.

Publications

- Shaokang Jiang and Michael Coblenz. **An Analysis of the Costs and Benefits of Autocomplete in IDEs**. To appear in the Proceedings of the ACM on Software Engineering (FSE 2024)

Scholarships and Awards

- Graduated from UW-Madison with distinction in the Major   Spring 2021
- Dean's List of College of Letters & Science at UW-Madison   Fall 2019–Spring 2021
- Dean's List of College of Science at IIT   Fall 2017–Spring 2019
- International Scholarship at IIT   Fall 2017–Spring 2019
- Member of Upsilon Pi Epsilon at IIT