Shaokang Jiang

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Education

University of California San Diego — La Jolla, CA
M.S. in Computer Science and Engineering, Advised by Michael Coblenz — *2022-2024 (expected)*

University of Wisconsin-Madison — Madison, WI
B.S. in Computer Science, GPA: 4.00/4.00, graduated with distinction in the major — *Graduated 2021*

Experience

Software Engineer — June 2024 – now
Pullscription

- Worked closely with Jago, the founder and CEO, to discuss, suggest, design, and implement the system structure for the blog and website system for the organization, aiming to create an easy-to-maintain structure that is fast for user to access it and optimized for SEO.
- Utilized Nginx and Docker to deploy the system on a cloud server and implemented the CI/CD pipeline using GitHub Actions.
- Deployed and integrated the Matomo tracking system with a focus on privacy concerns.
- Collaborated closely with the team and provided guidance in implementing the website system.
- Implemented a payment system using Stripe and authentication using Auth0 on the existing website using Vue.
- Worked with the design team to create and implement the blog site, embedding the abstract content into the main website and iOS app.

Graduate Student Researcher — April 2024 – now
University of California San Diego

- Worked with Michael Coblenz on the usability analysis of Copilot.
- Designed an experiment using an eye tracker to evaluate the costs and benefits of Copilot for programmers who are new to React. And executing it now.
- Designed and implemented an universe eyetracking platform for native based VSCode to collect data, and analyzed data using JMP.

Graduate Student Researcher — April 2024 – now
University of California San Diego

- Worked with Kristen Vaccaro and Deepak Kumar, and collaborated with two other group members to assess political bias in YouTube's recommendation system.
- Developed a method to match long and short items using a newly developed matching algorithm, and devised a mixed design to measure, collect, and evaluate outcome variables.
- Evaluated methods to measure the current political leaning of media outlets based on AllSides and other existing models.

Graduate Student Researcher — April 2024 – now
University of California San Diego

- Worked with Jude Abishek Rayan under the guidance of Steven Dow on improving conference communication protocols for projects CueHub and conference management.
- Built and tested software based on the discussion results, and assisted in designing the entire research workflow.

Researcher — April 2024 – now
Independent

- Worked with Jimmy Koppel on comparing and analyzing the advantages of using tutorials over the Cody system.
- Evaluated interview results using thematic analysis to identify themes and compare them between groups.

Graduate Student Researcher — January 2023 – September 2023
University of California San Diego

- 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 for programmers using an unfamiliar API, analyzed data using JMP, performed thementic analysis, and published a paper on the Foundations of Software Engineering.

- Found that participants who used autocomplete learned more about the API while spending less time reading documentation, although autocomplete did not significantly reduce the number of keystrokes required to complete tasks.
- Designed and implemented a consumer-level eye-tracking platform for web based VSCode and a Chrome extension to collect data.

Teaching Assistant January 2023 – now

University of California San Diego

- Major TA for Java and Data Structure courses (DSC30) with Soohyun Liao for two quarters.
- Sole TA for the Usability of Programming Languages course (CSE291) with Michael Coblenz for one quarter and TA for the same course for another quarter.
- Sole TA for Compilers (CSE 131) with Yufei Ding for one quarter, and Introduction to Data Visualization (DSC 106) with Sam Lau for another quarter.
- Guided group projects on programming languages and software engineering topics, and proposed, designed, and developed innovative course assignments.
- Conducted office hours and discussion sections to assist students and deepen their understanding.
- Managed course logistics, graded assignments, and collaborated with the professor and team members to refine course content.
- Received an 'Excellent' rating from the instructor, and over 90% of the students gave a 'recommendation' rating in the course evaluations.

Projects

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

Pullscription websites | *Vue, Vitepress, Auth0* 2024

- Designed a modern comic book shopping and blog site.
- Integrated Stripe payment solution.

Pullscription blog websites | *Vue, Vitepress, Auth0* 2024

- Designed a modern comic book shopping and blog site.
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Video matching and Leaning rating system | *Cloudflare Worker, HTML, JS* 2024

- An anonymous rating system for people to compare two matched videos and provide human feedback.
- Designed puretext based algorithm to match two videos, outperform any existing video matching algorithm in internal tests.

Workshop Manager | *Electron, React* 2024

- Designed and built a 4-component workshop manager for real-time user engagement.
- Utilized Worker, GPTs, Socket, HTTPS, and DDNS.

Cross platform Markdown app | *Electron, JavaScript* 2024

- Built two VSCode extension to help my own experiment.
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Cue Hub | *React, Firebase, Flask* 2024

- Worked on and deployed an online meeting platform with support for user communication and ideation.

HealthCare Chatbot | *Expo, Worker, GitHub, Jest, Vitest* 2024

- Led a group of five people to create a ChatBot with CI/CD pipelines.
- Integrated design principles, Jest testing, and Agile methodologies.

Online interactive shell | *JSP, Servlets, Java* 2023

- Built two VSCode extension to help my own experiment.
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Java code style checker on gradescope | *Shell, Java, Docker* 2023

- Built two VSCode extension to help my own experiment.
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Eyetracker Monitoring Platform | *C#, JS, Tampermonkey, Chrome extension* 2023, 2024

- Developed a universe monitoring platform for tracking VSCode development process.
- Integrated Tobii eye tracker 5.

An economical computer | *Node.js, GAMS, puppeteer* 2022

- Automatically scrape computer components' performance data weekly by simulating user behaviour and use optimization to find the best configuration.

Wise grader | *JavaScript, TensorFlow, Tampermonkey* 2021

- Developed a program to aid quicker grading by suggesting scores based on length, N-gram analysis, and topic relevance for dictation questions.

Covid data report | *Node.js, puppeteer* 2021

- Automatically scraped COVID data from various official sites by simulating user behaviour.
- Pushed filtered results to subscribed users.

Energy Simulator | *HTML, WebGL, JS, Java, JavaFX* 2020

- Enabled decision-making by solving linear problems and simulating energy usage.
- Developed a website/Java GUI with 3D representation.

Financial Organization App | *Expo, NLP.js* 2020

- Developed an app to organize expenses and income with voice interaction using locally hosted NLU for Capital One.

Financial Tutoring website | *HTML, ejs, Worker* 2020

- Led a team to create a financial education website with tools like a yearly budgeting tool for Capital One.
- Followed Agile methodologies.

A JavaFx program | *Java* 2020

- Developed a Java GUI program to manage and look up data among different farms.

AutoCommenter | *Java* 2019

- Automatically analyzed Java code and added comments based on preset rules.

HateFate Website | *HTML, JSP, SQL* 2017

- Led a four-person team to develop a website with core features.
- Implemented login, signup with email verification, and user pairing.

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R
Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI
Developer Tools: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib