Sifeng Chen

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Education

University of Rochester — Rochester, NY
B.S. in Computer Science — *Expected May 2024*
- GPA: 3.5

Experience

ROC Human-Computer Interaction Lab — March 2023 - Present
Software Developer — *Rochester, NY*
- Developed a full-stack web application using MeteorJS, ensuring user-friendly interface and seamless functionality.
- Leveraged Cloud Dev tools, such as MongoDB Atlas, to establish an efficient and secure database for the web app.
- Optimized the application's scalability and performance, reducing CPU usage by 85% and runtime by 90%.
- Conducted comprehensive testing using Puppeteer, guaranteeing application's reliability across various scenarios.
- Enhanced open-source to meet the lab's specific needs and documented contributions along with a developer guide for public use.

ReviCID — May 2023 - Present
Software Developer — *New York, NY*
- Spearheaded frontend development for the company's website and primary software during the early stages.
- Implemented various API services such as AWS S3, CloudFront, Auth0, and Stripe to enhance user experience.
- Adopted the Bulletproof React software architecture for a scalable and production-ready NextJS application.
- Researched websites of industry-standard companies and collaborated with team members for design concepts.

RocLab | Campus Software Consultancy — Feb 2023 – June 2023
Front-end Developer — *Rochester, NY*
- Incorporated interactive functionalities to facilitate client-side interactions with backend API endpoints.
- Developed static pages using React and Chakra UI for the web app, ensuring it's responsive and mobile-friendly.
- Collaborated with UI/UX team for client-side layout and designs, and with backend engineers for system designs.

University of Rochester, CSUG — Jan 2023 – May 2023
Tutor — *Rochester, NY*
- Hosted weekly Tutoring Drop-In Hours for courses such as Data Structures, Mobile App Dev, and Web Dev.
- Ran weekly club meetings and maintained organization within the club.

University of Rochester | Data Mining Course (CSC 240) — Dec 2022 – May 2023
Teaching Assistant — *Rochester, NY*
- Conducted weekly office hours to support students in overcoming challenges, resulting in a course average of A-.
- Organized and assigned 100 students to 4 TAs, improving the course's grading system and preventing conflicts.

Projects

UtoCom Hub: Your One-Stop Shop for Local Events | *React, Python-Flask, SQLAlchemy, Tailwind CSS, npm*
A community Web App for discovering and registering for local events.
- Built a scalable server-side architecture using RESTful API to handle large amounts of data and user traffic.
- Enabled user and events registration & login with secure information storage using Flask-SQLAlchemy database.
- Developed and tested various API endpoints for the functionality of user authentication and authorization.
- Improved user experience by developing a client for the web application using Front-end framework, ReactJS.

Reversi With AI Opponent | *Java*
A Game of Reversi (Othello) with an AI Opponent that makes optimal moves against players.
- Developed the data structures with Object-Oriented Design to represent the formal model for the game of Reversi.
- Designed adaptable adversarial state-space search framework for two-player, perfect knowledge, zero-sum games.
- Built a computer opponent that makes optimal moves against players using Minimax decision rule algorithm.
- Improved the computation time by implementing the Heuristic Minimax algorithm with Alpha-Beta pruning.

Technical Skills

Languages/Frameworks/Tools: React, NextJS, Meteor.js, JavaScript, Java, Python, C, Ada, Flask, HTML/CSS, AWS, MongoDB, SQLAlchemy, RESTful API, Swift, iOS Development, Core Data, npm, yarn, GitHub, Git.
Algorithms and Methods: BFS, DFS, Binary Search, Bubble and Merge Sort, Recursion, Dynamic Programming, Greedy, Dijkstra, Bellman-Ford, Graph Theory, Graph Algorithms Linear Programming, NP problems,
Artificial Intelligence: Backtracking and Minimax Algorithms, Linear Classification, Neural Network, CSPs.
Data Science and ML: Data Mining, Data Cleaning Techniques, Supervised and Unsupervised Machine Learning.