Chris Sifeng Chen

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EDUCATION

University of Rochester   Rochester, NY
B.S. in Computer Science   *Expected May 2024*
- GPA: 3.5
- Dean's List

EXPERIENCE

Rochester Human-Computer Interaction Lab   March 2023 - Present
Software Engineer   *Rochester, NY*
- Developed a mock social media web app and various features, ensuring quality UI and seamless functionalities.
- Contributed new features to the open-source framework's core package by building a real-time admin panel to track users' actions during experiments from scratch.
- Optimized the application's scalability and performance, by implementing the debouncing technique reducing CPU usage by 85% and runtime by 90% overall.
- Established comprehensive unit tests to cover various real life scenarios. Utilizing testing framework Puppeteer and minimized experiment costs and reduced crash rate from 80% to 0%.
- Designed database schemas and leveraged MongoDB Atlas to store participant response and actions across 20 experiment batches over the semester, averaging 30 participants per batch.
- Restructured backend codebase for scalability, code reusability and readability by modularizing key functions.

Revi   May 2023 - Present
Software Engineer | Front-end Tech Lead   *New York, NY*
- Spearheaded front-end development for the company's website and primary software during the early stages.
- Developed asynchronous data transformation feature by integrating message queuing (AWS SQS) and observer pattern to enhance user experience and task handling in cloud infrastructure's system.
- Reduced new feature development time by 30% by designing and implementing front-end architecture and folder structure that ensures codebase's flexibility and maintainability.
- Designed and documented SOLID standard for code contribution to ensure UI component reusability and readability
- Established workflow practicing agile/scrum for consistent feature delivery and enhancing cross-team collaborations.

RocLab | Campus Software Consultancy   Feb 2023 – June 2023
Front-end Engineer   *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 designs, and with backend engineers for app architecture design.

PROJECTS

HTTP Server | *C*
- Implemented lightweight HTTP server in C from scratch utilizing GNU sockets library and adhering to IETF's "HTTP/1.1: Semantics and Content" specifications. Achieving a deep understanding of network protocols.
- Implemented core functionalities (parsing, requesting, responding) for a standalone port-listening web server.

UtoCommunityEvents Hub | *React, Python-Flask, SQLAlchemy, Tailwind CSS, npm*
- 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.

Reversi With AI Opponent | *Java*
- 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: Java, Python, JavaScript, PHP, C, Ada, OCaml, SQL, Swift, HTML/CSS, SwiftUI.
Frameworks: React, NextJS, Express.js, Flask, Django, Meteor.js, Spring, TailwindCSS, Framer Motion, Websockets.
Developer Tools: GitHub, Git, Docker, Kubernetes, Postman, npm, yarn, AWS, MongoDB Atlas, Vercel, Figma.
Cloud Services: MongoDB Atlas, Azure, AKS, Vercel, Meteor Cloud, AWS, ECR, ECS, EC2, S3, CloudFront.