Xinran Cao

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PROFESSIONAL SUMMARY

Highly skilled software engineer with strong coding and debugging abilities. Excellent communicator and team player, adept at enhancing team dynamics. Experienced in user-centered design and development, agile methodologies, and quickly adapting to new technologies. Committed to delivering high-quality, user-focused software solutions.

EDUCATION

University of Michigan – Ann Arbor   Aug. 2022 – May. 2024
M.S. in Information | User-Centered Agile Development | GPA: 4.0/4.0
- **Core courses**: Interaction Design, Building Interactive Applications, Database App Design, Agile Software Development

University of Wisconsin – Madison   Sep. 2016 – May. 2020
B.S. in Computer Science & B.S. in Applied Mathematics | GPA: 3.8/4.0
- **Core courses**: Algorithms, Artificial Intelligence, Operating Systems, Probability & Statistics, Cryptography, Computer Networks

WORK EXPERIENCE

Software Engineer | WIRED-L Center **|** Internship   Jan. 2024 – Current
- Building an **Angular** software with senior researchers to address medication adherence in participants with hypertension.
- Restructured the navigation and 4 modules with **TypeScript** to improve information architecture and build health survey form component and medication-taking charts to better collect, track and display user health data.
- Deployed an Automated Messaging Platform using **AWS Lambda** and **Key Management Service**, featuring a specialized algorithm to automatically process and randomize messages from an 800+ message bank, tailored to user preferences and medication records based on research needs, optimizing patient engagement and adherence.

Software Engineer | Shanghai Aitai Technology   Nov. 2020 – Aug. 2021, May. 2023 – Aug. 2023
- Independently built "Beneficiary" module for **financial SaaS platform**, featuring data management and analytics across 3 distinct pages with 20+ subpages. This comprehensive module, integrated via **REST APIs,** enhances business data insights and streamlines operations through tailored functionalities like data visualization and data management.
- Implemented 10+ data-driven decision-making web modules using **React, Umi, Ant Design, Antv G2 Charts** and **Echarts**, which directly enhance primary market investor's decision precision and agility within our platform.
- Engineered 5 cross-platform cloud file management modules using **React, Taro** and **WeChat Devtools**, with an **HTML5** mobile interface and **WeChat Mini Program**. Added 3 improved features that facilitated seamless cloud document management and commenting functions, with responsive design ensuring consistency across all devices.

Graduate Student Instructor | JavaScript and React Course   Jan. 2024 – Apr. 2024
- Developed and implemented **E2E, unit,** and **component tests** using **Cypress** for 20+ distinct projects, evaluating over 1000 student submissions, configured **GitHub Classroom** and integrated auto-grading with **GitHub Actions**.
- Resolved environment issues on **GitHub Codespaces**, including debugging **Node.js** dependency conflicts due to Chromium updates and fixing **Docker** build failures in GitHub Actions caused by runner environment updates.
- Conducted detailed code reviews for over 10,000 lines of student submissions, emphasizing best practices such as modern **ES6 syntax** and performance optimizations such as preventing unnecessary re-rendering caused by redundant useEffects.

SELECTED PROJECTS

Tech Lead | Client Project **|** Detroit River Story Lab Web App **|** Deployment Website   Jan. 2024 – Apr. 2024
- Led an agile team through 5 sprints, collaborating with the client to build and deploy a **React + Redux** web application using **Google Cloud services** (Firebase, authentication, storage, hosting) and **Google Maps API**.
- Established and managed a **CI/CD** pipeline with **GitHub Actions** for automated updates and deployments. And composed GitHub collaboration guidelines for efficient and consistent code management.
- Oversaw feature development, testing, and releases, ensuring robust software releases through **Agile** methodologies.

Web Application Engineer Lead | Startup **|** EcoLogical   Jun. 2023 – Oct. 2023
- Led the development lifecycle of the Ecological business-oriented web application, managed versioning using **Git** and **GitHub**, and collaborated with UI/UX designers to iteratively refine the application.
- Handled form validation and submission and incorporated third-party APIs such as **Stripe** Payment for fraud prevention and secure transaction and **Google Autocomplete API** for accurate and efficient address auto-filling.
- Integrated backend services using **GraphQL APIs** and deployed the entire application infrastructure via **AWS Amplify**.

SKILLS

Technology Stack: JavaScript, TypeScript, Python, Java, C, SQL, HTML5, CSS3, Bootstrap, Ant Design, React, React Native, Redux, Next, Angular, Node, Django, Taro, GraphQL, REST, AWS, GCP, Docker, Cypress, Git, MongoDB