Michael Sun

Polymath software engineer with a background in front-end and back-end development, committed to building seamless, accessible applications that prioritize user experience.

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New York City Metropolitan Area

RELEVANT EXPERIENCE

Senior Software Engineer | Jun 2023 — Apr 2024 Full-time | **Lumen Technologies**
Full-stack Developer | Nov 2021 — Jun 2023 Contractor through Apex Systems

- Built and deployed 17 GitHub repositories, increasing deployment frequency to twice per week. Automated code releases, saving 30 minutes each cycle, and maintained project transparency through detailed documentation in Jira and Confluence.
- Engineered and integrated a fraud-detection API for ctl.io and lumen.com, identifying and preventing over 300 fraudulent sign-ups monthly, averting an estimated $3M in potential annual losses. Utilized JavaScript, Node.js, Express, and MySQL to achieve a 95% detection accuracy, minimizing false positives and strengthening security protocols.
- Upgraded CMS monitoring capabilities to display user activation processes, reducing customer onboarding time by up to 24 hours. Implemented RESTful routes and automated Microsoft Teams alerts, enabling real-time visibility for support staff and reducing the need for manual monitoring.
- Revamped mobile user experience across ctl.io and onramp-ui, leading to a 10% increase in user sign-up completion rate and a 25% boost in user retention through mobile-first CSS frameworks and responsive design. Collaborated closely with the UX/UI team, utilizing HTML, Sass, and Gulp.
- Developed an interactive product dashboard for Lumen.com, centralizing data access across applications and streamlining navigation for improved design consistency. Automated data synchronization with Vue.js, TypeScript, jQuery, and AWS (Lambda, CloudWatch, CodePipeline), fully eliminating manual update requirements.
- **Skills** | HTML, Sass, JavaScript, TypeScript, React, Vue, Angular, Loopback, AWS, Papertrail, Azure SQL, jQuery, Express, Axios, Gulp, MySQL, GitHub, Jenkins, Jira, Confluence, Nexus

Software Engineer Intern | Oct 2021— Nov 2021 | **LMI Aerospace**

- Developed and launched 14 SharePoint pages for 1,500 employees, doubling information transparency and significantly improving accessibility. Conducted thorough research on user needs and applied UX best practices to enhance navigation and ensure intuitive user experience.
- Enhanced internal CMS functionality, reducing data retrieval time by half and improving accuracy in inventory tracking by new sorting and display features. Utilized HTML, CSS, .NET, and C# for development.
- Conducted an in-depth analysis of customer and product data using SQL queries, generating over 20 comprehensive reports in MS Excel and Power BI. Identified key trends that informed about quarterly sales strategies, significantly enhancing the effectiveness of data-driven decision-making.
- **Skills** | .NET, C#, Microsoft SharePoint, MS SQL Server.

Research Assistant | Dec 2019 — Feb 2020 | **iLab South Dakota State University**

- Advanced U-Net model for improved bridge damage detection, achieving a 23% increase in accuracy and contributing to published research in APIC-IST 2020. Focused on deep learning techniques for computer vision, driving innovation in infrastructure monitoring.
- Journal Publication: The 15th Asia Pacific International Conference on Information Science and Technology (APICIST). "Sun, M., Won, K. (2020). Concrete Crack Detection Using A Modified U-Net Architecture. APIC-IST 2020."
- **Skills** | Python, Linux, Google Colab Cloud service, Keras, TensorFlow

Teaching Assistant | Jan 2018 — Jan 2019 | **EECS South Dakota State University**

- Provided 12 hours per week of mentorship in C/C++ programming and data structures, achieving an 88% student course completion rate and improving assignment scores by an average of 15% through targeted support.
- Graded assignments for a C++ programming course, reviewing and verifying code for over 50 students. Implemented detection methods that identified and reduced code plagiarism cases while ensuring consistent feedback to support students' learning progress.
- **Skills** | C, C++, Linux, VIM.

RECENT PROJECTS

React.js Web App | Fall 2024
Developed and deployed a React.js online store using Babel and Webpack. The application features RESTful routes, secure account creation using the Google Login API, and a checkout page displaying total price and item count. The next phase will include Redux, GraphQL for scaling, Stripe API integration, and React Native for iOS.
Skills | React, React DOM, Hooks, Reducer, Functional Components, Node.js, MongoDB (Atlas), JSX, Context API, Babel, Webpack, Bootstrap.

Node.js RESTful Web App | Summer 2024
Designed and built a free, public-facing, single-page web application with a RESTful API using multiple Node.js libraries and cloud services such as Google Firebase. This project showcases expertise in front-end and back-end web development. Visit my portfolio to view the live production site.
Skills | JavaScript, Node.js, Express, MongoDB (Atlas), RESTful API, Google Firebase, MapBox, Salt Hashing, Vercel

SKILLS

Programming Languages
JavaScript, TypeScript, HTML, CSS, Sass, C, C++, jQuery

Libraries & Frameworks
React, Hooks, Styled Components, MVC, Node.js, Express, Bootstrap

Tools & Platforms
Git, GitHub, Firebase, AWS, Webpack, MySQL, MongoDB, Heroku, Netlify, Vercel, Render

EDUCATION

M.S. in Computer Science
South Dakota State University
Aug 2017—May 2020
GPA: 3.6/4.0

B.S. in Architectural Studies
University of Missouri
Aug 2010—May 2014
GPA: 3.5/4.0