Michael W. Lu

About Me

Software engineer and architect proficient in driving product direction and leading engineering efforts across multiple teams.

Combining self-taught programming skills with a finance background, I deliver polished and innovative end-to-end experiences, earning consistent recognition and rapid advancement.

Pronouns: he/him

Skills

Technologies

JavaScript, TypeScript, HTML/CSS, C#, SQL, REST API, Git, Bash, Jira, Figma

Frameworks & Libraries

React, Next.js, .NET, Redux Toolkit, React Query, React Hook Form, React Table, Bootstrap, Tailwind CSS, Jest

Certifications & Awards

Scaled Agile SAFe® 5 Practitioner

HackerRank Certificates: JavaScript, React, REST API, C#, SQL

Spatial Front Team Hackathons: 1st place – Oct 2021; 2nd place – Apr 2021, Jul 2021, Apr 2022, Apr 2023, Jul 2023

Languages

English, Mandarin Chinese (conversational)

Interests

Weightlifting, menswear fashion, consumer technology, crosswords, dog training, cooking & mixology

Education

New York University | New York, NY
Stern School of Business, Class of 2013
Bachelor of Science in Finance & Economics

Contact

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- github/michaelwlu
- linkedin/michaelwlu

Experience

Spatial Front, Inc. ⧉ | Remote | Feb 2021 – present
(Leading government IT solutions provider specializing in geospatial services)
Team Lead/Architect (Apr 2022) | **Front-End Technical Lead** (Sep 2021) | **Software Engineer** (Feb 2021)

- Lead software development on two systems for the U.S. Department of Agriculture, successfully deploying high-quality solutions critical to natural resource conservation missions and relied upon by 2,500 USDA field offices and 15K monthly active users
- Direct 20 professionals across two cross-functional teams, providing guidance and mentorship to engineers, testers, designers, business analysts, and scrum masters

Project Highlights: *Conservation Practice Documents - Document Management System* (.NET, React, MS SQL Server, MS SharePoint)

- Optimized application architecture to prioritize data consistency between SharePoint cloud storage and SQL database, leveraging institutional Microsoft 365 subscriptions to reduce expenses by $300K in annual licensing fees
- Designed a relational database schema to support a workflow engine for document publication, enabling dynamic configuration of status transitions, action authorizations, and conditional task executions for 200+ conservation practices

Project Highlights: *Field Office Technical Guide* (.NET, React, MS SQL Server, Elasticsearch)

- Developed an enhanced search feature built on Elasticsearch and maintained by a data synchronization strategy involving push updates and scheduled batch jobs, providing users with the ability to full-text search 160K documents
- Implemented multi-document upload, move, and archive batch operations, increasing curation throughput by 25X for content managers
- Modernized React codebase by converting components from class-based to functional, abstracting logic into reusable hooks, and streamlining state management, resulting in improved maintainability with a 78% reduction in component lines of code

Freelance & Independent Project Work ⧉ | New York, NY | Mar 2020 – Feb 2021

- Project: Definitely Not Reddit — Reddit clone with user authentication, content posts (text, embedded media, meta link previews), upvotes/downvotes, and comments
- Project: Melody Chuang Coaching — Life-coaching business website with contact forms and social media widgets

The Recurse Center ⧉ | New York, NY | Jan 2020 – Mar 2020
(Community-driven, self-directed educational retreat)
Programming Sabbatical

- Self-studied programming fundamentals and full-stack web development in an immersive community setting of 35 fellow programmers
- Collaborated with peers in dozens of pair programming sessions and presented 3 talks to foster knowledge sharing and mutual growth

NYU Langone Health ⧉ | New York, NY | Mar 2014 – Jan 2020
Senior Financial Analyst (Aug 2017) | **Financial Analyst** (Mar 2014)

- Oversaw financial management of research activities at the Neuroscience Institute, playing a pivotal role in expanding funding from $20M to $40M over 6 years
- Pioneered the creation of a proprietary financial modeling system in MS Excel, providing enhanced analytical and strategic planning capabilities to 32 research labs

Community

Code Nation ⧉ | New York, NY | Oct 2022 – present
(Non-profit providing tech education to under-resourced youth)
Volunteer Instructor

- Teach introductory web development to a class of 14 students at NYC public high schools in twice-weekly virtual and in-person sessions
- Build up competence and curiosity in students under-represented in tech, resulting in 67% of alumni entering a STEM-related field compared to an 8% population baseline