

Nathan Cheng

U.S. Citizen — (407)-615-0853 — nathancheng7@gmail.com — <https://nathancheng.me>

EXPERIENCE

Microsoft (Office Products Group), Redmond, WA

Apr 2026 – Present

Software Engineer

- Building agent-focused anomaly detection systems to monitor Copilot interactions and improve overall release reliability.
- Engineering interactive UI dashboards using React and TypeScript to visualize complex anomaly data, enabling engineers to quickly triage agent-specific system issues.
- Developing scalable backend pipelines for processing large-scale telemetry data, seamlessly surfacing real-time diagnostics to frontend interfaces.
- Applying statistical techniques (forecasting, outlier detection) to automate issue discovery and drive dynamic UI alerts, significantly reducing manual investigation.

Microsoft (Responsible AI), Redmond, WA

May 2025 – Aug 2025

Software Engineer Intern

- Built an Azure-based Copilot agent reducing compliance workload by 25%, integrating backend logic with a responsive user interface.
- Designed RESTful backend APIs enabling scalable, stateless agent-server communication for seamless client-side experiences.
- Improved model reliability by reducing hallucinations via prompt engineering.

Apple (Vision Products Group), Sunnyvale, CA

May 2024 – Aug 2024

Software Engineer Intern

- Engineered production features for Apple Vision Pro, focusing on smooth user interactions and spatial UI rendering.
- Reduced client-side latency by 40% via optimized media streaming and async processing.
- Built performance-critical client and infrastructure systems using Swift.

MIT Lincoln Laboratory, Lexington, MA

Jan 2024 – Apr 2024

Research Intern

- Developed computer vision pipeline reducing modeling time by 80%.
- Implemented OpenCV-based detection and processing systems for visual data analysis.

PROJECTS

USublease — React, TypeScript, HTML/CSS, AWS, Google Maps API

Oct 2025

- Built and launched a highly responsive campus subleasing web application, driving adoption to 5,000+ users in the first month.
- Developed dynamic frontend search and filtering features, managing complex client-side state.
- Designed a scalable serverless backend using AWS Lambda and S3 to seamlessly serve user-generated media to the frontend.

DisasterMapAI — React, Node.js, Google Maps API, OpenAI

Oct 2024

- Built an interactive React dashboard for a disaster monitoring platform, visualizing complex real-time FEMA and NASA data.
- Developed backend services to aggregate live data and external news sources, ensuring rapid UI updates.
- Implemented LLM-based summarization to generate contextual insights and actionable alerts for end users.

EDUCATION

University of South Florida, Tampa, FL

Aug 2021 – Dec 2025

B.S. Computer Science

- Relevant Coursework: Data Structures and Algorithms, User Interface Design, Distributed Systems, Operating Systems

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C++, Java, HTML, CSS, SQL

Frontend / Client-Side: React, Next.js, Tailwind CSS, Responsive Design, State Management, UI/UX, Spatial UI

Backend / Infrastructure: Distributed Systems, Microservices, REST APIs, Scalable Backend Architecture, Async Processing

Data / ML: Time Series Analysis, Anomaly Detection, Statistical Modeling, Forecasting

Cloud & Tools: Git, Postman, AWS (Lambda, S3), Google Cloud Platform, Azure, Pandas