

Nathan Cheng

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EXPERIENCE

Microsoft (Office Products Group), Redmond, WA

Apr 2026 – Present

Software Engineer

- Building time series anomaly detection systems to improve Copilot release reliability.
- Developing scalable backend pipelines for anomaly detection, alerting, and diagnostics over large-scale telemetry data.
- Applying statistical techniques (forecasting, outlier detection) to automate issue detection and reduce manual investigation.
- Working with production telemetry and monitoring systems to identify anomalies and improve system reliability.

Microsoft (Responsible AI), Redmond, WA

May 2025 – Aug 2025

Software Engineer Intern

- Built an Azure-based Copilot agent reducing compliance workload by 25%.
- Designed RESTful backend APIs enabling scalable, stateless agent-server communication.
- 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.
- Reduced latency by 40% via optimized streaming and async processing.
- Built performance-critical systems using Swift and media infrastructure.

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.

PROJECTS

USublease — React, AWS, Google Maps API

Oct 2025

- Built and launched a campus subleasing platform with 5,000+ users in the first month.
- Designed and implemented a scalable serverless backend using AWS Lambda and S3 for media storage and data handling.
- Developed geospatial search and filtering features using Google Maps API to improve user discovery and engagement.

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

Oct 2024

- Built disaster monitoring platform integrating FEMA and NASA APIs for geospatial visualization.
- Developed backend services to aggregate live data and external news sources.
- Implemented LLM-based summarization to generate contextual insights and alerts.

EDUCATION

University of South Florida, Tampa, FL

Aug 2021 – Dec 2025

B.S. Computer Science

- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Architecture, Distributed Systems

TECHNICAL SKILLS

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

Backend / Infrastructure: Distributed Systems, Microservices, REST APIs, Event-Driven Systems, Scalable Backend Architecture, Data Pipelines, Async Processing, Monitoring and Telemetry

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

Cloud: Google Cloud Platform, Azure, AWS (Lambda, S3)

Tools: Git, Postman, Pandas