Nathan Cheng

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

Computer Science student with industry experience in **AI** and **AR/VR/XR** seeking SWE roles at innovative, mission-driven companies.

EDUCATION

University of South Florida, Tampa, FL   Aug 2021 – Dec 2025
B.S. Computer Science

- **Expected Graduation: Dec 2025**
- Coursework: Data Structures & Algorithms, Operating Systems, Computer Architecture, Software Engineering, Compilers, Automata Theory, Linear Algebra, Analysis of Algorithms

EXPERIENCE

Microsoft, Redmond, WA   May 2025 – Aug 2025
Software Engineer Intern

- Built scalable AI agent using **Microsoft Copilot** and Azure to expedite **Responsible AI** compliance process for Office product teams, cutting manual effort by **25%**.
- Extended **RESTful APIs** over **HTTP** with POST/GET endpoints for stateless agent–server communication.
- Applied **prompt engineering** techniques to reduce AI hallucinations and clearly define agent behavior, improving response accuracy and consistency.

Apple, Sunnyvale, CA   May 2024 – Aug 2024
Software Engineer Intern

- Engineered immersive **AR/VR** video playback features for Apple Vision Pro for **VisionOS** with RealityKit, AVKit.
- Reduced video-load latency by **40%** through **asynchronous preprocessing**.
- **Collaborated** with Human–Computer Interaction (**HCI**) engineers and designers to refine usability and deliver a polished, consumer-ready feature for production release.

MIT Lincoln Laboratory, Lexington, MA   Jan 2024 – Apr 2024
Spring Research Intern

- Deployed **computer vision** program that reduced modeling time by **80%** accelerating SysML workflows.
- Developed **OpenCV**-based pipeline using edge detection, Hough transform, and contour detection.
- Created program infrastructure to geenrate **CAD** for chip fabrication based on provided design specifications.

PROJECTS

USublease — React, Google Maps API, AWS   Oct 2025
- Launched and shipped campus-focused subleasing marketplace @ **https://usublease.com**.
- Integrated **AWS Lambda + S3** for serverless media handling and the **Google Maps Platform** for intuitive UI.
- Optimized front page loading time using image compression and loading algorithms

Fire Bending — Spectacles, Lens Studio, Snap AR   July 2025
- Developed immersive AR experience for **Snap Spectacles**: where users launch and control realistic fireballs via hand gestures.
- Built with **Lens Studio** and **Snap AR SDK**.
- Implemented particle systems and physics-based animations.

Ducky Beat Maker — Swift, SwiftUI   Feb 2024
- Designed interactive mobile music game for children featuring animated ducks that play user-assigned instruments.
- Leveraged synchronous **Swift** and **AVFoundation** audio frameworks to optimize real-time responsiveness and seamless sound playback during gameplay.

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, Swift, C++, TypeScript, Flutter, SQL
Frameworks: ARCore, RealityKit, ARKit, AVKit, Snap AR SDK, SnapML, TensorFlow, PyTorch, React, OpenCV, CoreML, MediaPipe, Metal, Sceneform, Youtube Data API, Video Encoding/Playback, WebXR
Platforms: VisionOS, Spectacles, iOS, Android, Azure, OpenAI, AWS (Lambda, S3), GCP, Jenkins, Lens Studio, Youtube, Xcode
Tools: Git, Firebase, Jira, Postman, Pandas, SQL/NoSQL, Confluence, NDK, OpenGL
Expertise: AR/VR, XR Interaction, XR UI/UX, Computer Vision, 3D Math/Modeling, Gesture & Hand Tracking, Machine Learning, Scalable Backend, Full Stack, Real-time Rendering, On-device ML, Mobile, AI Agents, LLMs, Responsible AI