

NANDITA VENKAT

SOFTWARE ENGINEER | XR & SPATIAL COMPUTING

nandita.venkat@yahoo.com · github.com/VenkatNan · eportfolio.mygreatlearning.com/nandita-venkat

SUMMARY

XR engineer with an MS in Extended Reality and a design background, building spatial applications for Apple Vision Pro in Swift and Metal — hand and image tracking, multi-user sessions, sensor integration, and the hardware prototyping behind them.

EXPERIENCE

Engineering Intern

Jun 2026 – Present

Noblis — Immersive Systems Lab

- Designed and built a haptic feedback glove prototype from the ground up, including circuit layout, wiring, soldering, and bench testing of the assembled hardware.
- Contributed UX design and QA testing to a LiDAR-based robot vision system rendered on Apple Vision Pro in Swift and Metal; reorganized the operator UI and authored an onboarding tutorial.
- Prototyped an ultrasonic distance sensor for the robot platform and integrated its live output into the Vision Pro visualization, adding a low-cost proximity sensing layer alongside LiDAR.
- Demood lab projects to visiting teams and stakeholders, translating technical systems for non-specialist audiences.

Apple Vision Pro Developer

Mar 2025 – Present

MedVR — Code Blue Simulation

- Building a code blue (cardiac arrest) training simulation for Apple Vision Pro that assesses a clinician's technique and decision-making during a simulated resuscitation.
- Implemented real-time CPR quality tracking on four metrics — compression rate, compression depth, hand placement, and hands-off interruption time — using Vision Pro hand tracking.
- Integrated image tracking and SharePlay in Swift to support shared, multi-user training sessions.
- Delivered a working prototype in three months and presented it to industry professionals at the 2025 MDIC conference.

Software Engineering Intern

Jul 2024 – May 2026

SWBC — Rails / Swivel Division

- Maintained and organized AWS Lambda functions and CloudFormation infrastructure supporting division services.
- Built and maintained a Windows Forms tool that parsed raw data strings into readable, multi-language tables.

VR Game Developer (Intern)

Jul 2022 – May 2023

University of Connecticut — Center for Clean Energy Engineering

- Developed a VR game teaching K-12 students about solar energy in C# with SteamVR, targeting VIVE and Oculus.
- Drafted game requirements with project lead Dr. Jasna Jankovic, delivered a fully functional prototype against them, and produced video progress updates in Adobe Premiere Pro.

EDUCATION

Northeastern University

2024 – May 2026

Master of Science in Extended Reality

University of Connecticut

2019 – 2023

Bachelor of Fine Arts in Digital Media and Design

Additional training: Data Analytics Certificate, UT Austin (2023) · Coding Bootcamp, General Assembly (2020–2021)

SKILLS

Languages: Swift, C#, C++, Python, Java, Rust, JavaScript (Node.js, React), HTML/CSS, SQL

Platforms & Tools: visionOS, Metal, SteamVR, Bevy, AWS (Lambda, CloudFormation), MySQL, Windows Forms, Git, Tableau, Adobe Suite (Premiere Pro, Audition)

Focus Areas: Spatial computing and XR development, hand and image tracking, UX/UI design, hardware prototyping (circuit design, soldering), LiDAR and ultrasonic sensing, QA and unit testing, game design