

NITHIN JUPUDI

☎ (702) 203 5318 ✉ yjupudi@uci.edu 🔗 linkedin.com/in/yegnanithin

Education

Master's in Embedded and Cyber-Physical Systems

University of California, Irvine

CGPA: 4.0

Sep 2024 – Dec 2025

Irvine, California

B.Tech in Electronics and Communication Engineering (Minor: Computing)

Manipal Institute of Technology

CGPA: 8.33

Oct 2020 – May 2024

Manipal, Karnataka

Relevant Coursework

AI & Programming: Data Structures, Deep Learning & AI, Fundamentals of Computing (Python), Applied Linear Algebra, Natural Language Processing (NLP)

Embedded & IoT: Embedded Systems Modeling and Design, IoT, Parallel Programming, Computer Architecture, Wireless Sensor Networks, Robotic Operating Systems (ROS)

Cybersecurity: Cyber Threat Intelligence and Incident Response, Digital Forensics, Network Security, Applied Cryptography

Experience

Tenet Healthcare Corporation

Cybersecurity Intern – Incident Response (IR) team

Jun 2025 – Present

Addison, Texas

- Worked on assisting and analyzing **40+ Events of Interest (EOIs)** using CS Falcon and Abnormal AI to review incident timelines.
- Built **3 master playbooks** to standardize and speed up the triage process across IR team workflows.
- Developed a **prototype IR chatbot** using **Python workflows and LLM integration** to automate basic investigation steps and reduce manual triage time.
- Conducted a proactive threat hunt by reviewing **1,400+ external-facing websites** to identify exposure risks and potential vulnerabilities.
- Led **3 company-wide cybersecurity awareness sessions**, promoting secure practices across departments.

Synaptics Inc.

Capstone Project – Industry Sponsored

Mar 2025 – Present

Hybrid: UC Irvine / San Jose, California

- Developed **GPIO drivers** for **8+** protocol variants on embedded chips used in production hardware.
- Built a **WaveDrom + LLM toolchain** to auto-generate timing/code diagrams with **90%** accuracy.
- Integrated **telemetry modules** to enable real-time waveform monitoring and debugging insights.

Centillion Networks

Project Intern

Jun 2023 – Sep 2023

Hyderabad, Telangana

- Built a secure **login page with multi-factor authentication** for access control.
- Developed a **Web GIS system** used by **200+** engineers for spatial mapping and analysis.
- Utilized **CAD tools** for analyzing network pole layouts and deployment efficiency.

Projects

AI Healthcare Bootcamp – Predictive ICU Monitoring | Python, scikit-learn, Boost-III

Jul 2025 – Present

- Part of a **multidisciplinary team** of clinicians, product managers, and engineers designing AI-driven interventions based on the **Boost-III protocol** (ICP, CPP, PbtO₂).
- Built early-warning models to flag neurological deterioration using vitals and waveform data via **Python pipelines and scikit-learn**.
- Worked on integrating predictions into bedside monitoring systems without disrupting ICU workflow.
- Collaborating with product leads to prepare for **real-world deployment and feedback cycles**.

SWRAU-Net: Atherosclerosis Detection | Deep Learning, Medical Imaging

Dec 2023 – May 2024

- Built a novel **Shearlet-Wavelet Residual Attention U-Net (SWRAU-Net)** to segment carotid artery vessel walls in 3D MRI.

- Achieved **Dice score of 0.77** and **Sensitivity of 0.83**, outperforming existing segmentation methods.

Patient Health Monitoring System | *Raspberry Pi 5, Edge AI, Sensor Integration*

Feb 2023 – Apr 2023

- Built a real-time vitals monitoring system using **Raspberry Pi 5** with cloud-based data syncing.
- Integrated **temperature and BP sensors**, triggering alerts for abnormal readings.
- Deployed a **lightweight deep learning model** for anomaly detection with 90%+ accuracy.

Technical Skills

Languages: Embedded C, C++, Python, System C, ARM7 Assembly, MATLAB, Verilog, SQL, HTML, CSS, JavaScript

Developer Tools: VS Code, Jupyter, Google Colab, ROS, LTspice, PSpice, Qualnet, MS Office

Cybersecurity Tools: Splunk SOAR, Abnormal AI, CrowdStrike Falcon, Magnet AXIOM, KAPE

Frameworks: NumPy, Pandas, Scikit-learn, OpenCV, TensorFlow, PyTorch, Hugging Face Transformers

Operating Systems: Linux, Windows

Leadership and Involvement

Red Cross Club – UC Irvine

Jan 2025 – Present

Volunteer

Irvine, California

- Volunteered at the **Red Cross Club desk** during campus resource drives and supported event coordination.
- Participated in the **Campus Blood Drive** check-ins and helped manage donor flow during the event.
- Took part in **Newport Beach Pier Cleanup** and regular campus beautification initiatives.

Alumni Guest Talk on “Cybersecurity – Digital Forensics” – MIT, Manipal

Feb 2024

Master of Ceremony

Manipal, Karnataka

- Hosted and coordinated a guest session on Cybersecurity Operations and Digital Forensics for 150+ students and professionals from the field.
- Handled speaker introductions, audience interaction, and technical setup during the session.
- Gained skills in **public speaking**, **event planning**, and technical communication.

RedX – MIT, Manipal

2021 – 2024

Core Team Member

Manipal, Karnataka

- Planned and led bi-quarterly weekend hikes for club members and local students.
- Managed sign-ups, route scouting, and safety logistics for outdoor group activities.