Anh Nguyen

linkedin.com/in/anhnnguyennh • anhnnguyennh@gmail.com • anhnnguyennh.github.io/me/ • + 1 (413) 409 4147

EDUCATION

University of Massachusetts Amherst — Expected Graduation: May 2027

Manning College of Information and Computer Sciences

B.S in Computer Science — GPA: 3.8

Relevant Coursework: Artificial Intelligence, Software Engineering, Introduction to Robotics, Introduction to Algorithms, Introduction to Computation, Introduction to C, Computer Systems Principles, Reasoning under Uncertainty, Object Oriented Programming (Python), Data Structures (Java), Programming Methodology (Javascript), Calculus, Linear Algebra

Award: Chancellor's Award, Dean's Honors List, Robert and Deanna Hagerty Scholarship

PROJECTS

She Zone (Hackathon Winner) — Feb 2025

Hack(H)er413 - 36hr hackathon — *Amherst, MA*

- Co-developed She Zone, an anonymous platform empowering women to share personal stories.
- Implemented an AI-powered chatbot to provide personalized support and engagement for users.
- Designed an upvote-based leaderboard system to highlight impactful stories and drive community interaction.

UResources — *Nov 2024*

HackUMass - 48hr hackathon — *Amherst, MA*

- Co-developed a student networking platform using JavaScript, HTML/CSS, Node.js, and MongoDB.
- Built and integrated a secure login system with session management for improved security and UX.

SKILLS

Programming Languages and Framewords: Python, Java, C/C++, C#, Swift, Dart, JavaScript, HTML, CSS, Node.js, EJS, MongoDB, Arduino

Machine Learning and AI: NumPy, Pandas, OpenCV, YOLO

EXPERIENCE

Robotics Researcher — *Sep 2024 - Present*

Dynamic and Autonomous Robotic Systems Lab — *Amherst, MA*

- Developed a synthetic data pipeline to train deep learning models for robotic mobility aids assisting Blind and Low-vision individuals.
- Utilized Unreal Engine 4 (UE4) with AirSim to generate 15,000+ photorealistic, annotated images for training datasets.
- Trained models on synthetic datasets achieved up to 12% higher precision compared to models trained on real-world data.
- Co-authored a research paper submitted to IEEE International Conference on Robotics and Automation (ICRA) 2026 on synthetic data generation for robotic mobility aids.

Undergraduate Researcher — *Sep 2024 - May 2025*

Dynamic and Autonomous Robotic Systems Lab — *Amherst, MA*

- Participated in the Early Research Scholars Program (ERSP), publishing a research poster on enhancing pedestrian signal recognition for autonomous guide dog robots.
- Built a new dataset of 1,500+ images (569 guide dog robot captures, 1,000 Google Earth images) tailored for safe street-crossing contexts.
- Fine-tuned YOLOv11 and YOLOv11-Seg models, achieving 95% accuracy and improving robustness of pedestrian signal detection in diverse environments.
- Conducted real-world testing on the guide dog robot, demonstrating successful real-time detection and labeling of pedestrian signals.