

An Nguyen

Evanston, IL | [linkedin.com/in/an-ngn](https://www.linkedin.com/in/an-ngn) | anngn.com

EDUCATION

Northwestern University

Master of Science in Robotics

Evanston, IL

Dec. 2025

Oberlin College and Conservatory

Bachelor's Degree in Computer Science

Oberlin, OH

May 2024

SKILLS

Programming: Python (NumPy, pandas), C++, C, Java, Bash, Unit Testing

Robotics: ROS 2, MoveIt, OpenCV, Gazebo, RViz, AprilTags, behavior trees, embedded systems, control systems

Hardware: Onshape, microcontrollers (ESP32, Arduino, PIC32), UART, I2C, quadrupeds, drones

Software Tools: Linux, Git, CMake, Docker, CoppeliaSim, gRPC, Protobuf, Bazel

Machine Learning: PyTorch, CNNs, VAEs, GANs, diffusion models, transformers, multimodal models

EXPERIENCE

Intrinsic Innovation LLC (Alphabet)

Robotics Software Engineering Intern

Jun. 2025 – Sep. 2025

Mountain View, CA

- Incorporated LLMs into Flowstate to automate behavior tree generation and manipulation for robotic workflows (gRPC, Protobuf, Bazel).
- Developed a Python-based pipeline transforming natural-language prompts into executable automation behaviors.
- Streamlined scene alignment and reduced manual programming effort through intelligent behavior synthesis.

VinAI

AI Engineering Intern

Apr. 2023 – Jul. 2023

Ho Chi Minh City, Vietnam

- Built a computer vision system to track driver head movements (Python).
- Improved distraction detection and mitigation in VinAI's driver management platform.

Heineken

Data Science Intern

Aug. 2022 – Feb. 2023

Ho Chi Minh City, Vietnam

- Optimized the data processing pipeline for 390,000+ store outlet records (Python, pandas).
- Reduced duplication detection time for 17,000+ outlets, improving data quality and efficiency.

Brown University (Google Research's exploreCSR program)

Research Assistant

Jan. 2021 – May 2021

Providence, RI

- Implemented a convolutional autoencoder to match 2D queries with 3D characters (Python, PyTorch).
- Streamlined animation workflows by automating rigging task matching between 2D and 3D assets.

PROJECTS

Self-Reconfigurable Quadruped Robot | C++, Python, ROS 2, OpenCV, YOLO (10 weeks)

- Designed and built a quadruped capable of switching between crawling and rolling modes.
- Integrated IMU sensing (I²C) and YOLO with Intel RealSense for tilt estimation and autonomous bowling.

Pool-inator: Vision-Guided Pool Playing with a 7-DoF Arm | Python, OpenCV, ROS 2, MoveIt

- Created an image processing pipeline for the Franka arm to localize pool ball coordinates.
- Implemented a motion planning interface in ROS 2 with MoveIt.
- Deployed collision-free planning in both Gazebo and physical environments.

Omnidirectional Mobile Manipulation with KUKA youBot | Python, CoppeliaSim

- Applied whole-body kinematics and dynamics for trajectory planning and feedback control on the KUKA youBot.
- Executed pick-and-place tasks in dynamic simulation environments.

Poetic Lens: Multimodal Image-to-Poetry Generator | Python, PyTorch, OpenCV, BLIP

- Built an AI pipeline that transforms real-time camera input into poetry.
- Integrated BLIP for image captioning and a custom-trained GPT model for text generation.

Swarm Painting with Quadrotors | Python, C, OptiTrack

- Implemented cascaded position-velocity PID controllers for reliable autonomous quadrotor flight.