

An Nguyen

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EDUCATION

Northwestern University <i>Master of Science in Robotics</i>	Evanston, IL Dec. 2025
Oberlin College and Conservatory <i>Bachelor's Degree in Computer Science</i>	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) <i>Robotics Software Engineering Intern</i>	Jun. 2025 – Sep. 2025 Mountain View, CA
<ul style="list-style-type: none">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 <i>AI Engineering Intern</i>	Apr. 2023 – Jul. 2023 Ho Chi Minh City, Vietnam
<ul style="list-style-type: none">Built a computer vision system to track driver head movements (Python).Improved distraction detection and mitigation in VinAI's driver management platform.	
Heineken <i>Data Science Intern</i>	Aug. 2022 – Feb. 2023 Ho Chi Minh City, Vietnam
<ul style="list-style-type: none">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) <i>Research Assistant</i>	Jan. 2021 – May 2021 Providence, RI
<ul style="list-style-type: none">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 <i>C++, Python, ROS 2, OpenCV, YOLO (10 weeks)</i>	
<ul style="list-style-type: none">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 <i>Python, OpenCV, ROS 2, MoveIt</i>	
<ul style="list-style-type: none">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 <i>Python, CoppeliaSim</i>	
<ul style="list-style-type: none">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 <i>Python, PyTorch, OpenCV, BLIP</i>	
<ul style="list-style-type: none">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 <i>Python, C, OptiTrack</i>	
<ul style="list-style-type: none">Implemented cascaded position-velocity PID controllers for reliable autonomous quadrotor flight.	