

Anthony Angeles

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Languages: Python, C++, Full Stack, C#

Skills: 3D Perception, Simulation, Path Planning, Containerized Workflows, ROS2, Unity3D

Experience

NVIDIA

Software Engineer

(Intern: Summers 2021–2023)

Santa Clara, CA

July 2024 – Present

PDE for Geforce – Internal Tooling Platform

- Lead technical developer for an internal platform supporting high-throughput data workflows across cross-functional teams.
- Implemented major development initiatives integrating critical services into the core platform, expanding its capabilities and scope.
- Architected new back-end modules and APIs to support internal tools and automation.
- Integrated parallel computing into workload pipelines to improve concurrency and reduce execution time.

Isaac Sim – Robotics Learning Platform

- Implemented ROS2 publishing for odometry in Isaac Sim from 2D to full 3D motion data, including linear and angular velocities on the X, Y, and Z axes.
- Implemented unit tests to ensure functionality and regression coverage for ROS2 odometry publishing pipelines.
- Integrated multiple AMR configurations into simulation-based ROS2 unit tests to validate generalized odometry behavior across robot types.
- Updated transform trees frame name method to become automatic based on hierarchy including target and intermediate prims
- Maintain production code for ROS2 within Isaac Sim along with unit tests

Research Experience

Research Assistant – VR Lab, Baskin School of Engineering

Advisor: Samir Ghosh

Santa Cruz, CA

Nov 2022 – Sept 2023

- Developed a computer vision pipeline to detect flammable objects in equirectangular VR imagery for immersive training applications.
- Integrated YOLOv8 and Detectron2 to perform real-time object segmentation and labeling.
- Contributed to a research publication using this tool submitted to CHI.

Research Assistant – AIEA Lab, Baskin School of Engineering

Advisor: Leilani Gilpin

Santa Cruz, CA

Jan 2024 – June 2024

- Contributed to research towards perception, object detection, and segmentation in autonomous vehicles.
- Investigated the best methods for motion and path planning using perception and sensor fusion.
- Worked towards a submission for the Waymo Open Dataset Competition.

Projects

A* Path Planning Environment

C#, Unity

May 2024

- Implemented a fully autonomous agent using pathfinding to follow the shortest path to a target in a dynamic environment.
- Designed an interactive 3D environment where users can place obstacles and observe real-time path planning.
- Implemented an agent using an A* algorithm that dynamically re-plans paths based on the user-modified environment.

Education

University of California, Santa Cruz

B.S. Computer Science

June 2024