Aidan Reilly

610-608-8166 | arr160@pitt.edu | linkedin.com/in/aidan-r-reilly | github.com/Razzi86 | portfolio

Experience

Komatsu Mining 05/2024 - present
Robotics Software Engineer Intern *Pittsburgh, PA*

- Developed software for autonomous vehicles in GPS-denied environments using ROS2, Linux, and Unreal Engine 5.
- Implemented robust mapping and localization algorithms, performing sensor fusion between odometry and LiDAR.
- Increased efficiency by 30%, potentially driving $800m in annual revenue; drastically improved safety.
- Focus in perception; used SLAM, NAV2, CUDA, ICP, 2D/3D LiDAR, Radar, Odometry, Occupancy Grid

Komatsu Mining 05/2023 - 08/2023
Robotics Software Engineer Intern *Pittsburgh, PA*

- Developed software for autonomous vehicles in GPS-denied environments using ROS2, NVIDIA Jetson, and Gazebo
- Designed nodes to filter pointclouds and segment objects, align pointclouds, and estimate volume and velocity.
- Wrote an adjustable executable program that procedurally generates simulated environments for simulation use.
- Collaborated with multiple teams of engineers; maintained code databases; documented code.

University of Pittsburgh 08/2022 - 05/2023
Teaching Assistant, Discrete Mathematics *Pittsburgh, PA*

- Supported students through recitation, tutoring, and office hours; Managed grading for homework and quizzes.

Projects — Portfolio

ANA (Autonomous Navigation Assembly) | github.com/Razzi86/ana_bot 08/2023 - present

- Designed and developed an autonomous car that fuses lidar and camera to perform autonomous navigation
- Researched and designed multiple prototypes, implementing perception, control, and path planning

MIT-PITT-RW, Perception Team | driverless.mit.edu/mitpittrw 01/2024 - present

- Developing software for an autonomous racecar that competes at speeds of over 150mph.
- Trained machine learning models for real-time obstacle recognition and avoidance using lidar, camera, and radar

Professional Tournament Poker 04/2019 - present

- Coached by super pros Chance Kornuth (#1 worldwide, 2020), James Romero (World Poker Tour Champ, 2016)
- Extensive mastery of game theory, statistics, and probability; Developed UBerkely poker course; Private coach

Clothing Segmentation Extension | github.com/DW-Han/fashion-segmentation-rep 08/2023 - 09/2023

- Developed a Chrome extension for live clothing segmentation and classification, achieving 86% accuracy
- Placed 2nd overall in the 2023 SteelHacks hackathon, winning the "User Experience" category

Education - *Combined Cumulative GPA: 3.72*

University of Pittsburgh 2024
Honors *- B.S. in Computer Science, Minor in Mathematics, GPA: 3.6*

Delaware County Community College 2021
Honors *- A.S. in Computer Science, GPA: 3.9*

Coursework: Data Structures 1/2, Computer Vision, Deep Learning, Artificial Intelligence, Practical AI, Operating Systems, Assembly & Computer Organization, Theory of Computation

Skills

Languages: C, C++, Python, CUDA, MATLAB, MIPS, x86, Blueprint, Java
Development: OpenCV, PyTorch, TensorFlow, JUnit, Docker, Azure DevOps, Git, Jetson, YOLO, CAD, Visual Studio
Robotics: ROS2, Perception, Mapping, Control, SLAM, Nav2, ICP, Unreal Engine 5, Gazebo, Linux/Ubuntu, Arduino