

Aidan Reilly

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EXPERIENCE

Komatsu Mining

05/2024 - present

Robotics Software Engineer Intern

Pittsburgh, PA

- Developed cutting-edge software for driverless underground mining vehicles in complex GPS-denied environments.
- Implemented LiDAR SLAM with parallel programming on embedded devices, reducing computation by 60%.
- Integrated autonomous navigation and path planning, leading to a 30% increase in operational efficiency.
- Gained experience with C++17, Python, ROS2, NVIDIA Jetson, Linux, SLAM, Nav2, ICP, Unreal Engine 5.

Komatsu Mining

05/2023 - 08/2023

Robotics Software Engineer Intern

Pittsburgh, PA

- Developed the core autonomy software stack for underground mining in complex and GPS-denied environments
- Designed and optimized perception algorithms to filter, segment, and align pointclouds; used icp to estimate material flow velocity (97% accuracy) and concave hull for volume (81% accuracy).
- Wrote a program that procedurally generates simulated environments, streamlining testing and development

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 a compact robot car capable of autonomous navigation, obstacle avoidance, localization, and mapping.
- Built a 3D-printed chassis from scratch with CAD, iteratively improving with each prototype.
- Utilizes C++, Python; platformed on NVIDIA Jetson, Arduino, Linux, ROS2; uses lidar, depth, camera.

MIT-PITT-RW, Perception Team | driverless.mit.edu/mitpitttw

01/2024 - present

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

Professional Tournament Poker

04/2019 - present

- Coached by super pros Chance Kornuth (Former #1 worldwide), James Romero (World Poker Tour Champion)
- 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: Computer Vision, Deep Learning, Data Structures & Algorithms, AI, Operating Systems

SKILLS

Programming: C++17, Python, ROS2, CUDA, MATLAB, Bash, Blueprint

Libraries: PCL, OpenCV, 2D/3D SLAM, Nav2, ICP, PyTorch, TensorFlow, Rtabmap, Cartographer

Development: Git, Docker, Visual Studio, Azure DevOps, Blender, Gazebo, Rviz2, Unreal Engine 5

Other: Linux, NVIDIA Jetson, Arduino, 2D/3D lidar, radar, imu, camera, depth