Aidan Reilly

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EXPERIENCE

Komatsu Mining — 05/2024 - present
Robotics Software Engineer Intern — Pittsburgh, PA
- Developed software for autonomous mining vehicles in various underground GPS-denied environments
- Performed and iteratively optimized sensor fusion for robust mapping, path planning, control, and autonomy.
- Increased efficiency by 30%, driving $800m in annual revenue; Drastically improved safety of underground mining.
- Focus in Mapping and Perception; Used ROS2, LiDAR, Radar, Odometry, SLAM, Unreal Engine 5.

Komatsu Mining — 05/2023 - 08/2023
Robotics Software Engineer Intern — Pittsburgh, PA
- Designed lidar perception algorithms to segment objects, match features, and estimate volume and velocity.
- Implemented nodes that aligned pointclouds for multi-vehicle localization and sensor calibration.
- Wrote an executable program that procedurally generated simulated environments of underground mines.
- Worked with a diverse group of engineers, wrote and documented clean code, and maintained code databases.

University of Pittsburgh — 08/2022 - 05/2023
Teaching Assistant, Discrete Mathematics — Pittsburgh, PA
- Supported students through weekly 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 — 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

Box Game | github.com/Razzi86/Box_Game — 08/2023 - 11/2023
- Engineered a two-player handheld game using Raspberry Pi and electrical engineering

EDUCATION

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 & Algorithms, Computer Vision, Deep Learning, Machine Learning, Artificial Intelligence, Software Quality Assurance, Operating Systems, Python, C++, MATLAB

SKILLS

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