Aidan Reilly

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EXPERIENCE

Robotics Software Engineer Intern — 05/2024 - present
Komatsu Mining — *Warrendale, PA*
- Developing autonomous vehicles for underground mining using **ROS2** and **Unreal Engine 5**

Robotics Software Engineer Intern — 05/2023 - 08/2023
Komatsu Mining — *Warrendale, PA*
- Led the development of a fully autonomous mining vehicle from simulation to physical production, increasing operational efficiency by over 25% and driving $1.1 billion in annual revenue
- Managed 10,000+ lines of code with **Docker** and **Azure DevOps** in a **Linux** environment
- Increased performance by 20x using CUDA, improving the quality of simulations and pointcloud processing
- Utilized the latest technologies of **C++, Python, 3D Lidar, Radar, IMU, ROS2, SLAM, NAV2, ICP**
- Presented progress to Vice Presidents, resulting in increased funding and project expansions

Undergraduate Teaching Assistant - Discrete Mathematics — 08/2022 - 05/2023
University of Pittsburgh — *Pittsburgh, PA*
- Supported students through weekly recitation, tutoring and office hours; managed grading and provided tutoring

PROJECTS

ANA - Autonomous Navigation Assembly | [github.com/Razzi86/ana_bot](#) — 08/2023 - present
- Engineered an autonomous robot car using **C++, ROS2, SLAM, NAV2, Lidar, Depth, Arduino, Jetson**
- Performs sensor fusion to achieve robust localization, control, and path planning

MIT-PITT-RW Perception Team | [driverless.mit.edu/mitpittrw](#) — 01/2024 - present
- Contributed to an autonomous racecar by developing ML models for real-time vehicle and obstacle recognition
- Modified docker to work on **ARM64 computer architecture**, enabling development on the NVIDIA Jetson Orin

Clothing Segmentation Extension | [github.com/DW-Han/fashion-segmentation-repo](#) — 02/2022 - 04/2023
- Led the development of an AI-based Chrome extension for live clothing segmentation, achieving %86 accuracy
- Utilized **Pytorch, TensorFow** for model, **JavaScript, CSS, HTML** for front and back end

Box Game | [github.com/Razzi86/Box_Game](#) — 05/2019 - 07/2019
- Engineered a two-player handheld game using Raspberry Pi and electrical engineering

EDUCATION

University of Pittsburgh — 05/ 2024
*B.S. in Computer Science, Minor in Mathematics, **Honors**, GPA: 3.6*

Delaware County Community College — 05/2021
*A.S. in Computer Science, **Honors**, GPA: 3.9*

Coursework: Deep Learning, Computer Vision, AI, Data Structures & Algorithms, C++, Python

SKILLS

Languages:	C/C++, Python, MATLAB, Java, JavaScript, URDF, Blueprint
Tools:	Docker, Azure Devops, Git/GitHub, NVIDIA Jetson, Unreal Engine 5, Gazebo, ROS2
Technologies:	PyTorch, TensorFlow, OpenCV, CUDA, Ubuntu, PyQt5, SLAM, Nav2, PCL, ICP, YOLO, CAD