

Aidan Reilly

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EXPERIENCE

Robotics Software Engineer Intern

Komatsu Mining

05/2024 - present

Warrendale, PA

- Developing autonomous vehicles for underground mining using **ROS2** and **Unreal Engine 5**

Robotics Software Engineer Intern

Komatsu Mining

05/2023 - 08/2023

Warrendale, PA

- Developed autonomous mining vehicles, increasing efficiency by 25% and driving \$1.1 billion in annual revenue
- Managed development with **Docker** and **Azure DevOps** in a **Linux** environment using Jetson Orin AGX
- 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

University of Pittsburgh

08/2022 - 05/2023

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/mitpitttw

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

*B.S. in Computer Science, Minor in Mathematics, **Honors**, GPA: 3.6*

05/ 2024

Delaware County Community College

*A.S. in Computer Science, **Honors**, GPA: 3.9*

05/2021

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