

Aidan Reilly

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EXPERIENCE

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|--|-------------------------------------|
| Robotics Software Engineer Intern
<i>Komatsu Mining</i> | 05/2024 - current
Warrendale, PA |
| <ul style="list-style-type: none">Developing autonomous vehicles for underground mining using ROS2 and Unreal Engine 5 | |
| Robotics Software Engineer Intern
<i>Komatsu Mining</i> | 05/2023 - 08/2023
Warrendale, PA |
| <ul style="list-style-type: none">Developed autonomous mining vehicles, increasing efficiency by 25% and driving \$1.1 billion in annual revenueStreamlined development with Docker and Azure DevOps in a Linux environmentIncreased performance by 20x using CUDA, improving the quality of simulations and pointcloud processingUtilized the latest technologies of C++, Python, 3D Lidar, Radar, IMU, ROS2, SLAM, NAV2, ICPPresented work to Vice Presidents, resulting in increased funding and expanded projects | |
| Undergraduate Teaching Assistant - Discrete Mathematics
<i>University of Pittsburgh</i> | 08/2022 - 05/2023
Pittsburgh, PA |
| <ul style="list-style-type: none">Supported students through weekly recitation, tutoring and office hours; managed grading and provided tutoring | |

EDUCATION

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|--|-------------------|
| University of Pittsburgh
<i>B.S. in Computer Science, Minor in Mathematics, GPA: 3.6</i> | 08/2021 - 05/2024 |
| Delaware County Community College
<i>A.S. in Computer Science, GPA: 3.9</i> | 08/2019 - 05/2021 |
| Coursework: Deep Learning, Computer Vision, AI, Data Structures & Algorithms, C++, Python | |

PROJECTS

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|---|-------------------|
| ANA - Autonomous Navigation Assembly https://github.com/Razzi86/ana_bot | 08/2023 - current |
| <ul style="list-style-type: none">Engineered an autonomous robot car, integrating state of the art tools like C++, Python, ROS2, SLAM, NAV2, Lidar, Depth, Jetson Orin, Arduino, and Encoder MotorsPerforms sensor fusion to achieve robust localization, control, and path planning | |
| MIT-PITT-RW Perception Team https://driverless.mit.edu/mitpitrw | 01/2024 - current |
| <ul style="list-style-type: none">Contributed to an autonomous racecar by developing ML models for real-time vehicle and obstacle recognitionModified docker to work on ARM64 computer architecture, enabling development on the NVIDIA Jetson Orin | |
| Clothing Segmentation Extension https://github.com/DW-Han/fashion-segmentation-repo | 02/2022 - 04/2023 |
| <ul style="list-style-type: none">Led the development of an AI-based Chrome extension for live clothing segmentation, achieving %86 accuracyUtilized Pytorch, TensorFow for model, JavaScript, CSS, HTML for front and back end | |
| Box Game https://github.com/Razzi86/Box_Game | 05/2019 - 07/2019 |
| <ul style="list-style-type: none">Engineered a two-player handheld game using Raspberry Pi and electrical engineering | |

SKILLS

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| 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 |