

JEREMIAH GODDARD

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Robotics engineer leveraging recent completion of master's in robotics and a focus on AI. Experienced in designing and developing algorithms for robotic manipulation and autonomous systems. Proficient in reinforcement learning, computer vision, and deep learning methods for image analysis and robotics applications. Able to integrate robotic movement with vision systems for task automation. Familiar with sensor fusion, embedded programming, and rapid prototyping. Possesses secondary expertise in troubleshooting complex power plant systems in the US Navy.

- Robotics
- Machine Learning
- Reinforcement Learning
- Computer Vision
- Problem Solving
- Control Systems

EDUCATION

M.S. Robotics | Oregon State University | Corvallis, OR | 3.72 GPA
B.S. Electrical & Computer Engineering | Oregon State University | Corvallis, OR | 3.68 GPA

PROFESSIONAL EXPERIENCE

Robotics Research Assistant

Aug 2023 - Present

Oregon State University | Robotics and Human Controls System Lab | Corvallis, OR

- Trained and validated ML/RL-based dexterous manipulation policies in simulation, applying sim-to-real transfer techniques for real world experiments and conducting systematic validation testing across varied task conditions.
- Performed real-time data acquisition for behavior analysis and training ML policies. Interpreted data through visualization for cross functional reporting.
- Trained a convolutional neural network (CNN) to classify keypoints in stereoscopic image pairs using open-source datasets. Implemented a keypoint matching pipeline using OpenCV and SIFTs for fundamental matrix estimation.
- Designed a vision-guided targeting system using a 6-DOF robotic arm and integrated camera to precisely aim and fire projectiles. Mapped robotic kinematics to real-world coordinates for consistent targeting accuracy.
- Assembled a Raspberry Pi-powered autonomous vehicle and implemented multithreaded sensor fusion using a 3-channel grayscale sensor and RGB camera data, improving real-time line-following performance and consistency.
- Programmed a TurtleBot for autonomous maze navigation using Lidar and IMU data for pose and distance information, with RGB-camera QR-code detection for directional decisions.

Nuclear Electronics Technician

Jan 2017 – Nov 2019

United States Navy | Naval Nuclear Power Training Command | Charleston, SC

- Performed component-level troubleshooting on complex electronic and control system architectures, interpreting detailed schematics to diagnose and isolate faults across interconnected subsystems.
- Operated nuclear reactor during routine and emergency maintenance activities. Conducted simulations to isolate electronic faults within protective circuits and reactor control modules. Replaced defective circuit boards to restore system integrity and reliability.
- Interpreted technical manuals, schematics, and procedures for mechanical and electrical maintenance activities. Applied detailed knowledge to successfully complete maintenance tasks under strict regulatory guidelines.

TECHNICAL SKILLS

Technical Proficiencies: Reinforcement Learning, Machine Learning, Deep Learning, Computer Vision, Simulation, Sim-to-Real, Version Control, Data Analysis, Motion Capture, Rapid Prototyping, 3D Printing, Control Systems, Linux
Libraries/Software: PyBullet, PyTorch, OpenCV, Pandas, Stable-Baselines3, Git, ROS/ROS2, KiCad, SolidWorks
Programming Languages: Python, C/C++, MatLab, AVR Assembly, LATEX

PUBLICATIONS

N. Swenson, **J. Goddard**, X. Fern, R. Balasubramanian, and C. Grimm, "Evaluating the Effect of State and Action Selection on In-Hand Manipulation Performance for Transferability," IEEE RAL, vol. 10, no. 6, pp. 5217–5224, June 2025.