JORDAN COUSINEAU

cousineau.jordan24@gmail.com | (503) 856-4523 | www.linkedin.com/in/jordancousineau

EDUCATION

Boston University Boston, MA
Master of Science, Major: Robotics and Autonomous Systems Jan 2026
Relevant Coursework: Soft Robotics, Robot Motion Planning, Image & Video Processing, Intro to Embedded Systems

Pacific University Forest Grove, OR
Bachelor of Science, Major: Mathematics Minor: Computer Science Aug 2020 - Aug 2024
Relevant Coursework: Linear Algebra, Multivariable Calculus, Data Structures, Intro to Databases

SKILLS

Programming Languages: Python, C++, C, Bash, R, SQL, PHP
Tools: Git, MatLab, RStudio, Linux, QEMU
Leadership: Lead Teacher, Teaching Assistant, Assistant Coach

EXPERIENCE

Robotics Intern Mar 2025 - Present
Oregon UAS Accelerator - Accipiter Aeroworks Remote

- Prototyping a dynamic programming-based path planner in Python for a solar-powered UAV to optimize energy-efficient routing
- Collaborating with lead mentor to align algorithmic design with mission constraints and energy models
- Incorporating weather data via API to dynamically adjust flight paths based on environmental conditions

Lead Teacher Nov 2024 - Present
The RoboHub - Robotics & AI Courses Cambridge, MA

- Teaching fundamentals of robotics to students using Lego Spike and Vex kits
- Lead discussions on sensor usage and feedback, exploring applications and limitations in real-world scenarios
- Created curriculum for programming simple algorithms such as: line following, and obstacle avoidance

PROJECTS

Network-Based EKF Simultaneous Localization and Mapping Feb 2024 - Present

- Creating an autonomous mobile robot operating on an arduino to obtain and transmit data to a local server
- Developing a Python websocket server to form communication with the robot and send the data to a python script to do sensor fusion, state estimation, and mapping calculations
- Maintaining a MySQL database to hold coordinates and observations to develop a visualization through the frontend

'BlazeBots' Robotics Simulation Oct 2024 - Dec 2024

- Developed a hybrid multi-agent robotics simulation through Python and Pygame to autonomously navigate and map environments, reporting obstacles to a central system
- Executed a bounded DFS sweeping algorithm for swarm navigation and obstacles detection, and A* algorithm for cargo robot's optimal path planning
- Applied Object Oriented Programming principles for modularity, maintainability, and scalability

Genre Classification and Popularity Prediction Oct 2024 - Dec 2024

- Applied and compared KNN, Random Forest, and Elastic Nets to achieve the highest accuracy and runtime of genre classification
- Predicted popularity using logistic and linear regression, and CNNs based on Billboards top hits to compare musical features between hits and target songs
- Performed data scraping, cleaning, feature removal, normalization, encoding, and 80/20 split

Extended Kalman Filter SLAM Senior Thesis Sep 2023 - May 2024

- Analyzed mathematical models and algorithms by reverse engineering EKF SLAM and breaking it down into its core foundations
- Researched state estimation, sensor fusion, and uncertainty within the context of localization and mapping in an autonomous state