Ahmed Moussaoui CV

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EDUCATION

Bachelor of Science B.S. Mechanical Engineering   March 2025
Oregon State University, Corvallis, OR
Focus: Robotics control option

PROJECT EXPERIENCE

Material Sample Testing Automation Project – College of Civil Engineering   Feb. 2025 - Present
- Drop in automation systems to assist technicians with repetitive material testing tasks. Focused on usability, modularity, and system reliability.
- ROS2-based automation using a 7-DOF robotic manipulator. Working with MoveIt2, OpenCV, point clouds, and pose estimation. Focused on system architecture and sensor fusion for pick-and-place operations.

Autonomous RC Aircraft, Design Build Fly Team (DBF) - Capstone Project   Sep. 2024 – June 2025
- Autonomous system sub-team lead to facilitate the testing and integration of an autopilot system.
- Implemented a ArduPilot autopilot system into a model test aircraft. Conducted flight testing on RC model aircraft, aiming for full integration into the main aircraft system.

Lunar Mining Rover Chassie Team – Space Exploration Club Project   Sep. 2020 – June 2021
- Autonomous system sub-team lead to facilitate the testing and integ

WORK EXPERIENCE

Lab Assistant – College of Civil Engineering   Feb. 2025 - Present
Robot Programing at OSU - Material Sample Testing Automation Project, Corvallis, OR
- Designing a minimally integrated automation system to assist technicians with repetitive material testing tasks. Focused on usability, modularity, and system reliability.

Undergraduate Learning Assistant – MIME   Sep. 2025 - Present
ME 203 – Computational Methods for Engineering, Corvallis, OR
- Assist students in learning **Python programming** for **data processing, analysis, and visualization** in engineering applications.
- Support instructors by **guiding lab activities**, answering student questions, and providing one-on-one help during coding exercises.
- Reinforce key concepts in **numerical methods, data handling, and problem-solving** using Python and relevant engineering libraries.
- Collaborate with faculty to improve course materials and enhance student understanding of computational tools used in mechanical and industrial engineering.

3D Modeler – Freelancer   May. 2022 – June 2022
Fiver- Remote
- Produced quality 3D models and renders according to customer requirements and specifications.
- Models worked on ranged from conceptual product designs, 3D art renderings, and manufacturing ready designs. 3D printed, Injection molded parts, and CNC parts.
- Wrote an algorithm to find points of interest on a map and generate path waypoints to navigate to said points and improved room mapping success rate by 50%.

TECHNICAL SKILLS

Skills: CAD & Engineering Tools: SolidWorks, Autodesk Inventor, Fusion 360 (CAD & CAM)
Hardware: 3D Printing, Machine Shop, electronics, soldering
Software: Microsoft Office Suite (Excel, Word, PowerPoint), Google Suite
Programming: Python, MATLAB, Arduino, C++, ROS2, GitHub

LEADERSHIP EXPERIENCE

Coach - (Esports Club at Oregon State University)   Sep. 2024 - Present
Oregon State University, Corvallis, OR
- Leading and managing two Valorant teams. Serving as head coach on tactical and team-based play.
- Facilitated targeted communication drills focused on active listening and teamwork, leading to a 50% improvement in on-field coordination during competitive matches against rival schools.

Vice President - (Lego Club at Oregon State)   Nov. 2024 - Present
Oregon State University, Corvallis, OR
- Collaborating with faculty to establish a LEGO-focused engineering and design community at OSU.
- Launched the LEGO Club, attracting 20+ members within the first term and fostering an engaging, hands-on learning environment.

INTERESTS

Robotics, Automation, Product Design, Mechanical Design, Flight, Programming, Education, Hands-on Prototyping