

AHMED MOUSSAOUI

541-908-6657
ahmedamoussaoui@gmail.com

ahmedmoui.github.io | linkedin.com/in/ahmed-latif-moussaoui
Corvallis, OR (Open to Relocation)

SUMMARY

Mechanical engineering graduate from Oregon State University (Robotics Control Option) who designs, fabricates, and tests electro-mechanical hardware end to end. Built robotic manipulator systems, autonomous aircraft, and custom structural enclosures from CAD through assembly and verification. Comfortable on the shop floor and in motion-planning code.

EDUCATION

Oregon State University
B.S. in Mechanical Engineering - Robotics Control Option

Corvallis, OR
June 2026

TECHNICAL SKILLS

CAD and Design: SolidWorks, Fusion 360, Autodesk Inventor, GD&T, DFM, Part and Assembly Design
Fabrication: 3D Printing (FDM), Rapid Prototyping, CNC, Soldering, Wiring and Electrical Assembly, Machine Shop
Robotics: ROS2, MoveIt2, ArduPilot, Mission Planner, Motion Planning, Systems Integration
Programming: Python, C++, MATLAB, OpenCV, YOLO, Docker, Linux, GitHub
AI and ML: AI API Integration, Computer Vision (OpenCV, YOLO), Pre-trained Model Deployment, Model Fine-tuning
Platforms: (Ubuntu) Linux, Raspberry Pi, Arduino, Embedded Systems

WORK EXPERIENCE

Robotics Lab Engineer
OSU College of Civil Engineering

Feb. 2025 – Present
Corvallis, OR

- Led 2–3 engineers automating repetitive material testing with a 7-DOF robotic manipulator.
- Built a vision-guided pick-and-place pipeline from scratch, cutting technician task time 75%.
- Presented working hardware capabilities and progress directly to prospective investors.
- Containerized the system with Docker for reproducible deployment across lab setups.

Undergraduate Learning Assistant, ME 203
OSU MIME Department

Sept. 2025 – Present
Corvallis, OR

- Taught Python data analysis and numerical methods to 25+ engineering students per term.
- Ran lab sessions and one-on-one tutoring, refining course materials with faculty.

PROJECTS

Autonomous RC Aircraft | *ArduPilot, Mission Planner, Avionics, Fabrication*

Sept. 2024 – June 2025

- Led the autonomous sub-team on a 6–10 person DBF capstone, building the aircraft from scratch including frame, wiring harness, and avionics integration.
- Achieved the first successful autonomous test flights in the team's history, across multiple test days.

SAMI Humanoid Robot | *ROS2, Pygame, Fusion 360, Raspberry Pi*

Spring 2025

- Designed and fabricated the full robot head enclosure and screen mount in Fusion 360 on a 3–5 person team, and built an animated face display with real-time ROS2 emotion-state control.
- Delivered a live audience demo of three modes (pose mirroring, dancing, emotional display) with continuous reliable operation.

Automated Security Door System | *C++, Arduino, Fusion 360, 3D Printing*

OSU ME 351

- Designed and 3D printed the full mechanical enclosure, integrating servo actuation, linkages, and sensors to halve part count and improve manufacturability.
- Built a custom metal-detector circuit from scratch and wrote a 5-state C++ control system with jam detection, forced-entry detection, and manual override.

LEADERSHIP

Head Coach, Esports Club
Oregon State University

Sept. 2024 – Apr. 2025
Corvallis, OR

- Coached and managed around 20 players across two competitive Valorant teams, improving in-game coordination through structured communication and teamwork drills.

Vice President, LEGO Club
Oregon State University

Nov. 2024 – Apr. 2025
Corvallis, OR

- Co-founded the club with faculty support and grew membership to 20+ students in one term through weekly build meetings and hands-on engineering activities.