

MEHRAD YOUSEFI

 Turin, Italy  +39 351 819 1386  mehradyousefi81@gmail.com
 mehradyousefi.cv  linkedin.com/in/mehrad-yousefi-rad0  github.com/Radyo02

PROFILE

Computer Engineering student at Politecnico di Torino and Developer Group Coordinator at Team DIANA, with experience in robotic simulation, digital twins, autonomous navigation, computer vision, XR, and rover-control software. Experienced with Unity, ROS 2, NVIDIA PhysX, MuJoCo, C++, C#, and Python. Seeking opportunities in Turin in software engineering, robotics, simulation, and autonomous systems, with the goal of continuing into a long-term role while pursuing a Master's degree.

TECHNICAL SKILLS

Programming:	C, C++, C#, Python, JavaScript, SQL, HTML, CSS
Robotics & Simulation:	ROS 2, Unity, NVIDIA Isaac Sim, NVIDIA PhysX, MuJoCo, digital twins, SITL, HITL
Computer Vision:	OpenCV, object detection, QR-code and tag detection, dataset annotation, Roboflow, position estimation
Communication & Tools:	TCP, UDP, MQTT, Git, GitHub, Linux, Notion, Meta Quest XR, Steam Deck integration
Languages:	Persian (Native), English (C1), Italian (A2)

EXPERIENCE

Team DIANA – Planetary Rover Team	Politecnico di Torino
<i>Software Engineer & Developer Group Coordinator</i>	<i>2024 – Present</i>
- Coordinate a developer group responsible for simulation, user interfaces, rover controllers, and XR systems within Team DIANA's Computer Science Department. - Developed rover simulation and digital-twin environments from scratch using Unity, ROS 2, MuJoCo, NVIDIA Isaac Sim, and NVIDIA PhysX. - Integrated mechanical CAD and SolidWorks models into Unity and configured rover joints, physics, controllers, communication interfaces, and terrain interaction. - Built simulation environments that allow software teams to test navigation, control, telemetry, and sensor-processing software when access to the physical rover is limited. - Implemented real-time communication between rover and simulation components using ROS 2, TCP, and UDP, following an earlier MQTT-based architecture. - Developed XR visualization and Steam Deck controller integration for rover operation, testing, and operator training. - Previously contributed to autonomous-navigation software for fiducial-tag and QR-code detection, localization, and position estimation using C++, Python, OpenCV, and ROS 2.	

SELECTED PROJECTS

Planetary Rover Digital Twin	<i>Unity, ROS 2, C#, C++, NVIDIA PhysX</i>
Built a digital-twin platform for rover testing, mission preparation, telemetry visualization, operator training, and validation of autonomous-navigation software.	
Autonomous Navigation & Computer Vision	<i>OpenCV, ROS 2, C++, Python, Roboflow</i>
Developed and tested components for tag detection, QR-code recognition, localization, position estimation, and annotated datasets for object-detection workflows.	

EDUCATION

Politecnico di Torino	Turin, Italy
<i>B.Sc. in Computer Engineering</i>	<i>Expected March 2027</i>
Amirkabir University of Technology	Tehran, Iran
<i>Coursework in Energy Engineering</i>	<i>2020 – 2022</i>

ACHIEVEMENTS & PUBLICATION

- 4th Place, European Rover Challenge 2025 with Team DIANA.
- Qualified for European Rover Challenge 2026.
- Participated in the University Rover Challenge 2026.
- Research Co-Author, "Simulation-Driven Development: Training, Testing, and Mission Planning for Planetary Rovers," International Astronautical Congress, Sydney, 2025.
- Ranked in the **top 1%** of more than 300,000 candidates in Iran's National University Entrance Examination.

CERTIFICATIONS

Google Advanced Data Analytics Capstone | IBM Introduction to Data Engineering | University at Buffalo Blockchain Platforms | SpaceCert