Mobina Jamali

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SKILLS: PyTorch, , TensorFlow, ROS, Linux, GIT, Reinforcement Learning, OpenCV, Pandas, SQL, Gazebo, OOP, TDD

LANGUAGES/ ENVS: Python, C++, HTML/CSS

SUMMARY

I am a roboticist and AI researcher working on Multi-Agent Reinforcement Learning. My research focuses on developing autonomous agents capable of collaborating with human in executing complex, multi-step tasks by integrating learning and planning strategies. My goal is to enhance human-agent interaction in dynamic and unpredictable environments.

EDUCATION

University of California San Diego 2023 - 2024
MicroMasters Program, Data Science

University of Calgary 2019 - 2023
Bachelor of Science, Physics

· Thesis: "Advancing the Control for a Highly Maneuverable Autonomous Underwater Vehicle (HM-AUV)", advised by Dr. Alex Ramirez-Serrano.

EXPERIENCE

Intelligent Robot Learning Lab (IRL), University of Alberta June 2024 - Present
Researcher

· Developing intelligent agents capable of collaborating with other agents, advised by Dr. Matthew E. Taylor.
· Investigating the application of goal recognition techniques to enhance multi-agent coordination.
· Implementing scalable solutions that enable robust goal recognition in multi agent systems, ensuring adaptability across various domains.

Unmanned Vehicles Robotarium Lab, University of Calgary September 2022 - April 2023
Roboticist

· Developed a comprehensive dynamic model and control scheme for a three-thruster configuration AUV.
· Employed the feedback control method and designed the control scheme, enabling the vehicle to have full autonomy.
· Successfully applied linear (PID) and nonlinear (NMPC) controllers and conducted extensive simulations to demonstrate the vehicle's ability to navigate through complex motions.

Faculty of Physics and Astronomy, University of Calgary January 2022 - April 2022
Undergraduate Teaching Assistant

· Collaborated with professors to create organized and engaging course materials for PHYS 229 (Modern Physics) and PHYS 259 (Electricity and Magnetism).
· Led tutorial sessions, assisting more than 120 students with course content and answering their questions.

EXTRA-CIRRUCULAR ACTIVITY

Calgary To Space Organization, University of Calgary May 2021 - April 2023
Orbit Determination Lead

· Led a 3U CubeSat design, operations, and mission planning with a focus on expertise in orbital mechanics.
· Conducted precise GPS data simulations (OEM-719) for efficient tracking and data gathering.
· Collaborated with NovAtel to establish quality control for project precision and reliability.