Daniel Florea

Personal Information

Name:	Daniel Vlad Florea Matei	**GitHub:**	dfloreaa
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Education

since 07/2023

MSEng in Computer Science
Pontificia Universidad Católica de Chile
Advisors: Alvaro Soto & Rodrigo Toro
GPA: 4.0
Alignment of a VLM with human intention as the task critic for robotic reinforcement learning
Relevant courses: Advanced Topics in AI, Natural Language Processing, Computer Vision, Sensors and Actuators for Robotic Systems, Optimal Estimation and Control for Robotic Systems

03/2019 - 12/2023

BS in Robotics Engineering (Maximum Distinction)
Pontificia Universidad Católica de Chile
Major: Robotics Engineering
Minor: Cognitive Robotics
Ranking: 8th out of 931 students (in all faculty)

07/2022 - 02/2023

Academic Exchange
Delft University of Technology (TU Delft)
Relevant courses: Planning & Decision Making, Machine Perception, Robot Software Practicals, HRI

Experience

since 07/2024

Robotics Engineer at Oddness Technologies
Development of software, hardware, and firmware for industrial robotic solutions, serving local and international clients. Experience spans the entire pipeline: CAD and PCB design, firmware development, ROS integration, navigation, perception and planning for various embodiments.

since 03/2024

Associate Professor at PUC's Department of Mechanical Engineering
Lecturer for IRB1010 - Introduction to Robotic Systems (2024, 2025) and IRB2001 - Fundamentals of Robotic Systems (2024).

since 07/2023

Research Student at CENIA
ML researcher at the National Center for Artificial Intelligence, led by Professor Alvaro Soto. Focused on integrating NLP with robotics applications, collaborating with researchers and PhD students.

01/2024 - 03/2024

Research Intern at Texas A&M University
Conducted research in Dr. Swaroop's laboratory, contributing to an autonomous vehicle project. Focused on perception and planning algorithms, as well as real-world testing. The team achieved 1st place in the national SAE competition.

07/2023 - 07/2024

Course Coordinator and Teaching Assistant @ PUC Chile
Course Coordinator for Artificial Intelligence (2023 and 2024), responsible for planning course structure, materials, assignments, and managing the teaching assistant team and student inquiries (Syllabus). Additionally, supervised a total of 20 teaching assistants across various courses, including Mobile Robotics, Fundamentals of Robotic Systems, Deep Learning, Machine Learning, and Pattern Recognition.

02/2021 - 07/2023

Research Assistant at Human-Centered AI and Visualization Lab
Undergraduate Researcher at HAIVis Lab, led by Professor Denis Parra. Focused on medical images, specifically in pathology prediction, medical report generation, and diagnostic explainability.

02/2021 - 07/2022

Cognitive Robotics Team member at Robot-X Maritime Challenge
Developed the simulation environment and perception pipeline for the autonomous catamaran in the 2022 Robot-X Maritime Competition. Designed and developed the vision pipeline and simulated environments.

Language Proficiency	Spanish (Native), English (C1), French (B2), Romanian (Native), Dutch (Basic)
Technical Skills	Python, C++, ROS, PyTorch, Gazebo, Autodesk Fusion, Xilinx Vivado