# IURE ROSA


## CONTACT ME AT

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Visit my projects in:

/IureRosa

## ABOUT ME

Reinforcement Learning | Multi-Agent System | Aerial Robotics | Human-Robot Iteration | Robot Cooperation | Computer Vision

Tends to engage his team's effort through a proactive leadership in projects. Strives for pragmatic, agile and scalable solutions by means of well-documented code and concise modeling. Mostly interested in Robotics, Artificial Intelligence, Computer Vision, Data Science, DevOps, 4.0 Industry as well as Industry Internet of Things applications and Robotic Process Automation.

## WORK EXPERIENCE

### Associate Researcher
### Robotics Specialization Center, 2021 - present

- Conduct research in the field of mobile robotics. I work with reinforcement learning algorithms and applications of neural networks to optimize the navigation of autonomous vehicles.
- Reviewer of Journals

### Visiting Research Student
### Czech Technical University, Prague | March - July, 2023

- Works with the MRS Group, at the Faculty of Electrical Engineering, where conducts research in the field of autonomous robot navigation using reinforcement learning techniques.

## PUBLICATIONS

### Conference Papers

**ICUAS | INT`L Conference on Unmanned Aircraft Systems**

Q-learning based path planning method for uavs using priority shifting.

**LARS | Latin American Robotics Symposium**

A 3D Q-Learning Algorithm for Offline UAV Path Planning with Priority Shifting Rewards

### Under Review

**An offline Q-learning based Path Planning Algorithm for UAVs using Priority Shifting**, 2022 - Journal of Intelligent & Robotics Systems

**A Markov Decision Process for Object Localization on Water Surfaces in UAV images**, 2023 - INT'L Conference on Unmanned Aircraft Systems

**UAV Navigation in 3D Urban Environments with Curriculum-based Deep Reinforcement Learning**, 2023 - INT'L Conference on Unmanned Aircraft Systems

**Imitation-based Deep Reinforcement Learning for Mapless Robot Navigation**, 2023 IEEE/RSJ International Conference on Intelligent Robots and Systems

**Curriculum-based Reinforcement Learning for an Effective Multi-Agent Path Planning Algorithm in Warehouse Scenarios**, 2023 - International Conference on Industry Applications

### Work in Preparation

**Autonomous UAV Swarms with Transfer-based Multi-Agent Reinforcement Learning for a Scalable Damage Assessment**

**Real-Time Visual Navigation for Autonomous Robots using a Reinforcement Learning Strategy**

## MY EDUCATION

### Electrical Engineering Bachelor
### Federal University of Viçosa, 2017 - 2022

- Followed optional courses on:
  - Operations Research (logistics, stock, queues)
  - Data Structures and Algorithm Analysis
  - Special topics in Mobile Robotics
- Taught as main instructor in Python and MATLAB courses.

### Master`s Degree in Computer Science
### Federal University of Viçosa, 2023 - present

Research's Area: Robotics and Artificial Intelligence

## LANGUAGES

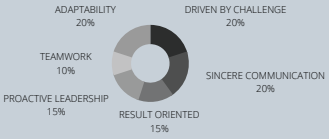
- Portuguese
- English
- German
- Spanish

## SKILLS

**HARD**

- Python, MATLAB, PyTorch
- Bash, Git, Keras, ROS, Gazebo
- Tensorflow, CUDA, Linux, Shell
- CMake, C++, Lua, V-REP, Docker

**SOFT**




## EXTRA

+ Review duties

Journal of Intelligent & Robotic Systems, Autonomous Robots, Sensors, Asian Journal of Control, Control Engineering Practice, International Journal of Advanced Robotic Systems, Robotics and Autonomous Systems.

CBA 2020, ICUAS 20-22, LARS 2021, ICRA 2022

+ Extracurricular education

Robotics Specialization, University of Peensylvania (Coursera)
Reinforcement Learning Specialization, University of Alberta (Coursera)
Modern Robotics Specialization, Northwestern University (Coursera)

+ Academic portfolio

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ORCID

## REFERENCES

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