

Marcos Menon Jose

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EDUCATION

University of Alberta (Edmonton, AB, Canada)

September 2023 - August 2025*

Thesis Based M.Sc. in Computing Science. *GPA: 4.0/4.0*

*Expected graduation date

Advisor: prof. Marlos C. Machado

University of São Paulo (São Paulo, SP, Brazil)

November 2021 - December 2023

M.Sc. in Electrical & Computer Engineering; *GPA: 4.0/4.0*

Awarded the *Programa de Bolsas Itaú* (PBI) Fellowship

Thesis: A Deep Reinforcement Learning Question-Answering Agent for Complex Questions using Texts and Tables.

Advisor: prof. Fabio Gagliardi Cozman

University of São Paulo (São Paulo, SP, Brazil)

Jan. 2014 - Dec. 2019

B.Sc. in Mechatronics Engineering

Universitat Politècnica de Catalunya (Barcelona, Spain)

Aug. 2017 - July 2018

International Exchange Student Program

SELECTED PUBLICATIONS

M. Jose, F. Cação, M. Ribeiro, R. Cheang, P. Pirozelli, F. Cozman. Question Answering with Texts and Tables through Deep Reinforcement Learning. *Brazilian Conference on Intelligent Systems (BRACIS)*, 2024.

P. Pirozelli, **M. Jose**, P. Filho, A. Brandão, F. Cozman. Assessing Logical Reasoning Capabilities of Encoder-Only Transformer Models. *International Conference on Neural-Symbolic Learning and Reasoning (NESY)*, 2024.

P. Pirozelli, **M. Jose**, I. Silveira, F. Nakasato, A. Brandão, A. Costa, F. Cozman. Benchmarks for Pirá 2.0, a Reading Comprehension Dataset on the ocean, the Brazilian coast, and climate change. *Data Intelligence*, 6(1):29–63, 2024.

P. Pirozelli, A. Castro, A. Oliveira, A. Oliveira, F. Cação, I. Silveira, J. Campos, L. Motheo, L. Figueiredo, L. Pellicer, **M. Jose**, M. José, P. Ligabue, R. Grava, R. Tavares, B. Matos, Y. Sym, A. Costa, A. Brandao, D. Mauá, F. Cozman, S. Peres. The BLue Amazon Brain (BLAB): A Modular Architecture of Services about the Brazilian Maritime Territory. *IJCAI-ECAI workshop on AI: Modeling Ocean and Climate Change*, 2022.

M. Jose, M. José, D. Mauá, F. Cozman. Integrating question answering and text-to-SQL in Portuguese. *International Conference on Computational Processing of Portuguese (PROPOR)*, 2022.

F. Cação, **M. Jose**, A. Oliveira, S. Spindola, A. Costa, F. Cozman. Deepagê: answering questions in Portuguese about the Brazilian environment. *Brazilian Conference on Intelligent Systems (BRACIS)*, 2021.

A. Paschoal, P. Pirozelli, V. Freire, K. Delgado, S. Peres, **M. Jose**, F. Nakasato, A. Oliveira, A. Brandão, A. Costa, F. Cozman. Pirá: A Bilingual Portuguese-English Dataset for Question-Answering about the Ocean. *Proceedings of the 30th ACM International Conference on Information & Knowledge Management (CIKM)*, 2021.

L. Cotrim, **M. Jose**, E. Cabral. Reinforcement learning control of robot manipulator. *Brazilian Journal of Applied Computing (RBCA)*, 13(3), 42-53, 2021.

TEACHING EXPERIENCE

University of Alberta (Edmonton, AB, Canada)

Teaching Assistant for the courses:

• Introduction to Reinforcement Learning (CMPUT 365)

Fall 2024

• Introduction to Artificial Intelligence (CMPUT 261)

Winter 2024

• Introduction to Reinforcement Learning (CMPUT 365)

Fall 2023

Instituto Mauá de Tecnologia (São Paulo, SP, Brazil) Mar. - May 2021 and Apr. - June 2022

Reinforcement Learning Course

- Designed, developed, and delivered a specialization course on Reinforcement Learning, encompassing foundational concepts as well as advanced deep algorithms.
- The course emphasized practical application, enabling students to develop and implement various Deep Reinforcement Learning solutions in Python.

C2D (São Paulo, SP, Brazil)

July 2022 - Aug. 2022

Reinforcement Learning Course

- Adapted and delivered the previously mentioned Reinforcement Learning course with a stronger focus on practical applications.
- The course was offered to graduate students at the University of São Paulo as well as data scientists at Banco Itaú.

University of São Paulo (São Paulo, SP, Brazil)

Jan. - Feb. 2017 and Jan. - Feb. 2019

Introductory classes for first-year engineering students

- Founded and coordinated an initiative to offer extracurricular classes for first-year engineering students from low-income backgrounds, providing foundational knowledge to help them succeed in their courses.
- Developed and taught sessions on algebra, calculus, and physics.

**WORKING
EXPERIENCE**

Itaú-Unibanco (São Paulo, SP, Brazil)

April 2022 - June 2022

Data Scientist Intern

- Contributed as a Data Scientist at *Itaú-Unibanco*, the largest private bank in Latin America, within their graduate academic summer program.
- Developed a computer vision algorithm for the automated extraction of information from agricultural contract images.
- Implemented the project on AWS EC2 cloud infrastructure.

Nu Invest/Easynvest (São Paulo, SP, Brazil)

Jan 2020 - Aug 2020

Data Engineer

- Worked as a Data Engineer at Nu Invest, one of the largest broker companies in Brazil
- Participated in the development of the Databricks and Delta Lake infrastructure for the entire company data.
- Designed and optimized ETL (Extract, Transform, Load) processes to organize and automatize the company's data acquisition.

Nu Invest/Easynvest (São Paulo, SP, Brazil)

May 2019 - Dec 2019

Data Engineer Intern

- Developed web scraping scripts to collect and structure data from websites.
- Focused on extracting relevant public data such as market trends, financial statistics, and consumer reviews to support data analysis and decision-making.

Urbit (São Paulo, SP, Brazil)

Sept 2018 - May 2019

Data Scientist Intern

- Served as a data scientist at Urbit, a startup that provides a data-driven platform offering real estate insights.
- Developed machine learning algorithms for counting people and vehicles with local processing on Raspberry Pi.

**CODING
SKILLS**

Python, PyTorch, Matlab, Web Scraping, C/C++, LaTeX

Proficient

LANGUAGES

English	Fluent
Portuguese	Native
Spanish	Intermediary