Marcos Menon Jose

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EDUCATION

University of Alberta (Edmonton, AB, Canada) September 2023 - September 2025*
Thesis Based M.Sc. in Computing Science *Expected graduation date
Advisor: prof. Marlos C. Machado

University of São Paulo (São Paulo, SP, Brazil) June 2021 - December 2023
M.Sc. in Electrical & Computer Engineering
University of São Paulo is the leading university in Latin America
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 Student Exchange Program

PUBLICATIONS

Comparing Computational Architectures for Automated Journalism
Y. Sym, J. Campos, M. José, F. Cozman
To appear in proceedings of the XIX National Meeting on Artificial and Computational Intelligence (ENIAC '22), 2022.

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

Integrating question answering and text-to-SQL in Portuguese
M. José, M. José, D. Mauá, F. Cozman
15th International Conference on Computational Processing of Portuguese (PROPOR '22), 2022.

Interpretability of Attention Mechanisms in a Portuguese-Based Question Answering System about the Blue Amazon
S. Spindola, M. José, A. Oliveira, F. Cação, F. Cozman
Proceedings of the XVIII National Meeting on Artificial and Computational Intelligence (ENIAC '21), 2021.

Deepagé: answering questions in Portuguese about the Brazilian environment
F. Cação, M. José, A. Oliveira, S. Spindola, A. Costa, F. Cozman
Brazilian Conference on Intelligent Systems (BRACIS '21), 2021.

Pirá: A Bilingual Portuguese-English Dataset for Question-Answering about the Ocean
A. Paschoal, P. Pirozelli, V. Freire, K. Delgado, S. Peres, M. José, F. Nakasato, A. Oliveira, A. Brandão, A. Costa, F. Cozman
Proceedings of the 30th ACM International Conference on Information & Knowledge Management (CIKM '21), 2021.

Reinforcement learning control of robot manipulator
L. Cotrim, M. José, E. Cabral
Brazilian Journal of Applied Computing (RBCA), 2021.

Benchmarks for Pirá 2.0, a Reading Comprehension Dataset on the ocean, the Brazilian coast, and climate change
P. Pirozelli, <u>M. José</u>, I. Silveira, F. Nakasato, A. Brandão, A. Costa, F. Cozman
Manuscript submitted for publication.

TEACHING EXPERIENCE	**Instituto Mauá de Tecnologia, São Paulo, SP**	Mar. - May 2021 and Apr. - June 2022

Graduate Reinforcement Learning Course

- Created, developed, and taught a graduate Reinforcement Learning Course covering fundamental topics to algorithms with the latest neural function approximators.
- The course also had a practical focus, students were able to see and develop several different Deep Reinforcement Learning applications in python.

C2D, São Paulo, SP July 2022 - Aug. 2022

Reinforcement Learning Course

- Adaptation from the Reinforcement Learning Course mentioned above, but more application-focused.
- Course given to graduate students at the University of São Paulo and data scientists at Banco Itaú.

Introductory classes for first-year engineering students Jan. - Feb. 2017 and Jan. - Feb. 2019

- Founded and organized the introductory classes project, which consists of extracurricular classes for low-income Engineering first-year students focused on providing the basic knowledge necessary to begin the course.
- Prepared and taught classes about algebra, calculus, and physics.

RESEARCH **Center for Artificial Intelligence (C4AI), University of São Paulo** Aug 2020 - Present

- C4AI is a research center for advanced artificial intelligence in Brazil, sponsored by IBM and FAPESP.
- Developing Natural Language Processing applications in Portuguese and English by leveraging classical models and transformers neural networks.

WORKING EXPERIENCE ***Itaú-Unibanco*, São Paulo, SP** April 2022 - June 2022

Data Science Summer Internship

- Worked as a Data Scientist at *Itaú-Unibanco*, the largest private bank in Latin America, in their academic summer program.
- Creation of a computer vision algorithm for automatically extracting information from pictures of agricultural contracts.
- Project also covered the implementation on AWS EC2 cloud.

Nu Invest/Easynvest, São Paulo, SP 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 construction and implementation of the Databricks and Delta Lake infrastructure for the entire company data.
- Coding in python to optimize and construct ETL (Extract, Transform, and Load) processes by organizing and structuring the company's data from multiple sources.

CODING SKILLS **Python, PyTorch, Matlab, Web Scraping, C/C++, LaTeX** Proficient

LANGUAGES

English	Fluent
Portuguese	Native
Spanish	Intermediary