

Tomaz Maia Suller

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Education

Politecnico di Milano

Master of Science, Computer Science and Engineering - Artificial Intelligence, Global average 28.18/30

Milan, Italy

Expected July 2025

Escola Politécnica da Universidade de São Paulo

Bachelor of Engineering, Computer Engineering, Global average 9.1/10.0, 4th best in class of 79

Sao Paulo, Brazil

Expected Dec 2025

Experience

Undergraduate Researcher

Laboratory of Intelligent Techniques – applied artificial intelligence lab

Sao Paulo, Brazil

Mar 2021 – Mar 2022

- Realising the inefficiency of legacy data pipelines, learned to speed up and parallelise data processing while using more efficient binary file formats, resulting in 10× faster processing using 2.5× less storage, leading to subsequent adoption of new technologies by other researchers
- First author and presenter of an accepted paper at the 2021 National Meeting on Artificial and Computational Intelligence (ENIAC) [2], and co-author of an accepted paper at ENIAC 2022 [1] on the optimisation of neural network classifier architectures subject to noise
- Developed data-driven applications for predictive maintenance of offshore oil platforms in an interdisciplinary group of professors and undergraduate, master's and international PhD students with funding from the state oil firm Petrobras

Data Engineering Intern

Stefanini Scala – IT consulting firm on analytics, AI and cloud

Sao Paulo, Brazil

May 2022 – Sept 2022

- With several day's delay in delivering client-requested data, automated a manual data collection process, saving over 2 week's work while developing a reusable algorithm based on public government datasets and open-source tools (Pandas, GeoPandas, Dask)
- Developed several components of a web-scraping platform, including data extraction with `bash` and Python, transformation with Pandas, task scheduling with Apache Airflow, and a reproducible local test environment using Docker Compose

Data and Analytics Intern

Certsys – technology trust advisor

Sao Paulo, Brazil

Jan 2023 – Aug 2023

- Developed and deployed a data lake proof-of-concept leveraging PostgreSQL, Apache Spark and Delta Lake on on-premises Linux VMs to create a single source of truth for corporate data, using this infrastructure for the first time to eliminate cloud computing costs
- In order to develop an internal data strategy, interviewed key stakeholders across all areas to create actionable project proposals, producing and presenting reports for the CTO and CEO which set out the vision for the Data and Analytics department
- In order to reduce code duplication and disseminate best coding practices, developed an internal library to facilitate ETL pipeline development in Python for integrating the company's multiple corporate systems through their APIs and, when not available, RPA

Undergraduate Teaching Assistant, “System's Programming” (PCS3616)

Department of Computer and Digital Systems Engineering (PCS)

Sao Paulo, Brazil

Nov 2022 – Apr 2023

- Developed assembler toolchain (PCS3616/`mn-rs`) for the simplified von Neumann architecture presented in class, using Rust to achieve a 1000× speedup in execution time over the previous version, and using continuous delivery through GitHub Actions for cross-compilation

Projects

Mentor

The Junior Academy of The New York Academy of Sciences

Online

Feb 2023 – Present

- Given his desire to contribute back to the programme, applied and was selected as mentor for high school students of The Junior Academy, in order to assist them during the development of their 2-month innovation challenges, having mentored 16 students to date

Skills

Languages: Portuguese (native), English (fluent, C2 certified), Italian (advanced)

Computer Languages: Python (advanced), VHDL, Verilog, Rust, SQL, Shell, Java, C (intermediate), R, C++ (basic)

Computer Tools: Linux, Git, SSH, Dask, Pandas, scikit-learn, Keras (advanced), Apache Airflow, Apache Kedro, Docker (intermediate), Apache Spark, Docker Compose, PostgreSQL, GitHub Actions (basic)

Cloud Computing Services: Google Cloud Storage, Compute Engine; Azure Databricks

Publications

- [1] Aldomar Silva et al. “Machine learning for noisy multivariate time series classification: a comparison and practical evaluation”. In: *Anais do XIX Encontro Nacional de Inteligência Artificial e Computacional*. Campinas/SP: SBC, 2022, pp. 682–693. DOI: 10.5753/eniac.2022.227600. URL: <https://sol.sbc.org.br/index.php/eniac/article/view/22823>.
- [2] **Tomaz Suller** et al. “Evaluation of Neural Architecture Search Approaches for Offshore Platform Offset Prediction”. In: *Anais do XVIII Encontro Nacional de Inteligência Artificial e Computacional*. Online Event: SBC, 2021, pp. 326–337. DOI: 10.5753/eniac.2021.18264. URL: <https://sol.sbc.org.br/index.php/eniac/article/view/18264>.