MATEUS BEGNINI MELCHIADES

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EDUCATION

Funcação Escola Técnica Liberato Salzano Vieira da Cunha   **Novo Hamburgo, Brazil**
Technician Degree in Electronics   Feb 2014 – Nov 2018

Universidade do Vale do Rio dos Sinos   **São Leopoldo, Brazil**
Bachelor of Science in Computer Science   Feb 2019 – Jul 2023
- **Thesis**: Dynamic Option Creation for Option-Critic Reinforcement Learning
- **Overall grade**: 9.24 / 10

WORK EXPERIENCE

Altus Sistemas de Automação   **São Leopoldo, Brazil**
Product Marketing Intern   Feb 2018 – Oct 2018
Product Marketing Assistant   Oct 2018 – Apr 2019
- As part of the Product Marketing team, I was responsible for creating product demos for events and technical articles for the website's knowledge base. Later, I helped develop experimental IoT solutions and present them to potential clients.

itt Chip   **São Leopoldo, Brazil**
CNPq PIBIC Research Fellow   Aug 2019 – May 2020
PADIS Research Fellow   Aug 2020 – May 2021
- As a researcher at the Intelligent Factory project in partnership with the semiconductor company HT Micron, I developed data analysis tools and trained deep learning models for fault prediction in machinery by analyzing sensor data.

Universidade do Vale do Rio dos Sinos   **São Leopoldo, Brazil**
Research Assistant   Jun 2021 – Present
- The project I am currently at, sponsored by Dell, aims to create a language model focused on answering fiscal-related questions in the form of a chatbot. My contributions include fine-tuning existing models for question-answering, creating question-generation models from scratch, and developing tools for annotating documents and evaluating answers.

PROJECTS

Vanilla OS
Fabricators Ltd.   Jan 2023 – Present
- Open source Linux distribution aimed at regular users and developers alike. Focuses on immutability, atomic updates, ease-of-use, and containerization of the developer workflow.
- Started contributing with code in January 2023, promoted to Contributors Leader in May.
- Contributions range from GUI applications in Python to system-level tools in Go that leverage technologies like LVM and Podman.

HONORS & AWARDS

Second place at IoT Student Contest 2021   **São Leopoldo, Brazil**
Issued by *Brazilian Society of Microelectronics (SBMicro)*   Apr 2021
- Contest organized by SBMicro, HT Micron, and CAS where undergraduate students from around the country developed Internet of Things projects using LoRa. My team's project, 3SA - Autonomous Accident Alert System, won second place.

Honorable Mention and Distinguished Student at XXVIII UNISINOS Scientific Initiation Exhibition **São Leopoldo, Brazil**
Issued by *Universidade do Vale do Rio dos Sinos*   Oct 2021
- Best work and presentation at the University's scientific exhibition, where students involved in research projects present their work to the general public.

Second place at AWS Deep Racer São Paulo   **São Paulo, Brazil**
Issued by *Amazon Web Services*   May 2023
- 2nd place at the AWS DeepRacer event in São Paulo, Brazil. Invited universities hand-picked one student to travel to the event and fine-tune a Reinforcement Learning model to race a miniature autonomous car through a racing track.

Brazilian Computing Society Distinguished Student Award   **São Leopoldo, Brazil**
Issued by *Brazilian Computing Society (SBC)*   Aug 2023
- Award given by the Brazilian Computing Society to the graduating student with the highest overall grade in their respective class.

SAP Honor Student Award   **São Leopoldo, Brazil**
Issued by *SAP Labs Latin America*   Aug 2023
- Awarded by SAP to graduating students with outstanding academic performance.

PUBLICATIONS

Anticipating faults by predicting non-linearity of environment variables with neural networks: a case study in semiconductor manufacturing

Published on *LatinX in AI @ ICML 2021*   Jul 2021

FastIoT: an efficient and very fast compression model for displaying a huge volume of IoT data in web environments

Published on *International Journal of Grid and Utility Computing (IJGUC)*   Jan 2022

MoStress: a Sequence Model for Stress Classification

Published on *International Joint Conference on Neural Networks (IJCNN)*   Jul 2022

LANGUAGES & SKILLS

- **Languages**: Portuguese (Native speaker), English (Fluent)
- **General**: Academic Writing, Public Speaking, Project Management
- **Computer Science**: Reinforcement Learning, Natural Language Processing, Deep Learning, Operating Systems, Data Science
- **Programming**: Python, Go, Rust, C, LaTeX, Bash