

Thomas Vaitses Fontanari

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EDUCATION

Universidade Federal do Rio Grande do Sul (UFRGS)

Porto Alegre, RS

Master of Science in Computer Science

Aug. 2021 – Nov. 2023

- Final grade: 10/10
- Applied and interpreted graph neural networks in gene expression classification tasks using PyTorch, PyTorch Geometric, and Python machine learning ecosystem ([link to dissertation](#))
- Worked with undergraduate student on techniques for evaluating imbalanced datasets with cross-validation ([link to publication](#))
- Worked with undergraduate student on feature selection applied to genomic datasets
- Co-supervised bachelor's thesis on complexity characterization of genomic data ([link to publication](#))
- Co-supervised bachelor's thesis on measuring efficiency of pooling methods for graph neural networks
- Supervised by Prof. Mariana Recamonde-Mendoza ([homepage](#))

University of Kaiserslautern-Landau (RPTU)

Kaiserslautern, Germany

Exchange Program

Mar. 2019 – Mar. 2020

- Classes on Collaborative Intelligence, Embedded Intelligence and Machine Learning projects.

Universidade Federal do Rio Grande do Sul (UFRGS)

Porto Alegre, RS

Bachelor of Engineering in Computer Engineering

2015 – 2021

- Final grade: 9.7/10 (*summa cum laude*)
- For my Bachelor thesis, I've developed a video processing algorithm for simultaneously magnifying subtle color and motion variations ([link to publication](#)) and implemented parts of it in Android ([link to thesis](#))
- Thesis supervised by Prof. Manuel Menezes de Oliveira Neto ([homepage](#))

WORK EXPERIENCE

Data Scientist

Sep. 2023 - Present

Petrobras

Rio de Janeiro, RJ

- Worked mostly with BI and text analysis
- Worked on various internal projects using Python and its ML/Deep Learning ecosystem during the on-boarding data science course

Software Developer (part-time)

Sep. 2019 - Present

Wille Engineering

Hattersheim am Main, Germany - Remote

- Developed ETL system for providing more user-friendly data for data scientists in a research project
- Developed embedded computer vision applications, mostly in Python
- Development of GPS tracking applications on Nordic boards, mostly in C

Undergraduate Research Assistant

Mar. 2019 - Mar. 2020

EIT at the University of Kaiserslautern-Landau

Kaiserslautern, Germany

- Worked on siamese neural networks for identifying defects in packaging. Main tools: Python, PyTorch, OpenCV, Python ML Ecosystem
- Worked on embedded software on real-time operating systems (RTOS)

Undergraduate Research Assistant

Mar. 2018 - Mar. 2019

Logic Circuit Synthesis Group at UFRGS

Porto Alegre, RS

- Analyzed energy-efficiency aspects of pruning neural networks, mostly with PyTorch ([link](#))
- Implemented and designed adder-compressor logical circuits using VHDL ([link](#))

Undergraduate Research Assistant

Jul. 2016 - Jul. 2017

Gtech.Edu at UFRGS

Porto Alegre, RS

- Developed an Android application and a PHP server for using Sobek, a text mining software developed at the group. Mostly using Java.

HONORS AND AWARDS

Láurea Acadêmica (*summa cum laude*)

2021

Informatics Institute at UFRGS

Porto Alegre, RS

- Award conceded for achieving at least 80% of grades A in courses attended at UFRGS and graduating on schedule

Outstanding Student - Computer Engineering

2021

Brazilian Computer Society (SBC)

Porto Alegre, RS

- Award conceded for achieving the highest grade among the graduating students

Academic Merit - Computer Engineering

2021

CREA-RS

Porto Alegre, RS

- Award conceded for achieving the highest grade among the graduating students

Honorable Mention

2015

Brazilian Olympiad of Informatics - University Level

Brasil

- 15th place

LANGUAGES

- English: advanced. TOEFL iBT 110/120 (R: 30, L: 29, S: 25, W:26)
- German: basic
- Portuguese: native

PUBLICATIONS

See list in my Google Scholar.