Thomas Vaitses Fontanari

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EDUCATION

Universidade Federal do Rio Grande do Sul (UFRGS)
Master of Science in Computer Science

Porto Alegre, RS

Aug. 2021 – Nov. 2023

- Final grade: 10/10
- Applied and 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

University of Kaiserslautern-Landau (RPTU)
Exchange Program

Kaiserslautern, Germany

Mar. 2019 – Mar. 2020

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

Universidade Federal do Rio Grande do Sul (UFRGS)
Bachelor of Engineering in Computer Engineering

Porto Alegre, RS

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)

WORK EXPERIENCE

Data Scientist
Petrobras

Sep. 2023 - Present

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)
Wille Engineering

Sep. 2019 - Present

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
EIT at the University of Kaiserslautern-Landau

Mar. 2019 - Mar. 2020

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
Logic Circuit Synthesis Group at UFRGS

Mar. 2018 - Mar. 2019

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
Gtech.Edu at UFRGS

Jul. 2016 - Jul. 2017

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

Brazillian 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

Brazillian 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.