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 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. Dra. 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. Dr. 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
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.