Francisco Galuppo Azevedo

Machine learning, optimization, statistics.

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Education

2023 – Present, PhD in Computer Science, UFMG
Under supervision of Prof. Adriano Veloso
LLM-assisted optimization for heuristic design.

2021 – 2023, MSc in Computer Science, UFMG
Dissertation under supervision of Prof. Adriano Veloso.   **GPA:** 99/100
Title: Stochastic Neural Dynamic Programming.
Defense Committee: Ram Rajagopal, Wagner Meira Jr.

2017 – 2021, BSc in Computer Science, UFMG
First-Class Degree.   **GPA:** 94/100

Experience

Mar 2024 – Present, *Research Engineer*, Kunumi
Reinforcement learning for LLMs;
Relational Deep Learning models such as Relational Transformers.

Apr 2022 – Dec 2022, *Machine Learning Engineer*, Kunumi
Machine learning for banking and healthcare applications.

Sep 2021 – Dec 2023, *Graduate Scholarship*, Petrobras
Machine learning for petrochemical applications.

Oct 2020 – Apr 2021, *Undergraduate Scholarship*, EMBRAPII
Machine learning for industrial applications.

Mar 2020 – Jul 2020, *Undergraduate Scholarship*, MPMG
Design and development of web scraping tools for social networks.

Aug 2017 – Nov 2020, *Research Assistant*, UFMG
Undergraduate Research Assistant under Prof. Fabricio Murai.
Topic: Dynamics in Complex Networks.

May 2017 – Dec 2017, *Teaching Assistant*, Colégio Santo Antônio
Math teaching assistant for middle school.

Scientific Publications

2025, Learning Dispatch Policies for Hydrothermal Power Systems with Imperfect State Information and High Reinforcement
ICDM 2025 Workshop on Data Mining for Reliable Decision-Making.   Lang. 🇺🇸

2025, Enhancing Genetic Algorithms for Feature Selection with Language Models
2nd IEEE International Workshop on Large Language Models for Finance. Lang. 🇺🇸

2024, I've Heard This Before: Initial Results on TikTok's Impact on the Re-Popularization of Songs
arXiv preprint.
`https://arxiv.org/abs/2411.01239` Lang. 🇺🇸

2023, Extreme event counterfactual analysis of electricity consumption in Brazil: Historical impacts and future outlook under climate change
Energy.
`https://doi.org/10.1016/j.energy.2023.128101` Lang. 🇺🇸

2023, Assessing Climate Change Impacts on Electricity Consumption: Micro to Macro Perspectives from California's Commercial Sector to Brazil's National Grid
AGU Fall Meeting 2023.
`https://ui.adsabs.harvard.edu/abs/2023AGUFMGC23J1183S/abstract` Lang. 🇺🇸

2021, Evaluating the state-of-the-art in mapping research spaces: A Brazilian case study
PLOS ONE.
`https://doi.org/10.1371/journal.pone.0248724` Lang. 🇺🇸

2018, Estimation Errors in Network A/B Testing Due to Sample Variance and Model Misspecification
IEEE/WIC/ACM International Conference on Web Intelligence (WI).
`https://doi.org/10.1109/WI.2018.00-40` Lang. 🇺🇸

2018, Response models for randomized experiments on large social networks
Workshop em Desempenho de Sistemas Computacionais (WPerformance).
`https://doi.org/10.5753/wperformance.2018.3343` Lang. 🇧🇷

2018, Analysis of clustering algorithms for randomized experiments on large social networks
Workshop em Desempenho de Sistemas Computacionais (WPerformance).
`https://doi.org/10.5753/wperformance.2018.3329` Lang. 🇧🇷

Honors and Awards

2021, *CNPq Postgraduate Scholarship*, UFMG
Awarded to the top student in the master's program application.

2021, *First-Class Degree*, UFMG
Awarded to the top student of a Bachelor's degree.

2020, *Summer@EPFL*, EPFL
Summer fellowship at EPFL – Accepted Student.
Cancelled due to COVID-19.

Nov 2016, *Harvard-MIT Mathematics Tournament*, Cambridge, USA
Contestant, part of the 2π Guarani team.

Nov 2016, *Olimpíada Mineira de Matemática*, MG, Brazil
Minas Gerais Mathematical Olympiad.
Contestant, Honorable mention.

2016, *Olimpíada Brasileira de Física*, Brazil
Brazilian Physics Olympiad.
Contestant, Bronze medal.