

FREDSON SILVA DE SOUZA AGUIAR

Brazilian | Single | 24 years
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Objective

I seek the opportunities to make a difference through professional and academic interchange, and the study of topics related to mathematics and its applications.

Academic Training

2023 - 2024: Escola de Matemática Aplicada (FGV/EMAp)

Master's Degree in Mathematical Modeling
University Average Grade (GPA): A (median)

2018 - 2022: Escola de Matemática Aplicada (FGV/EMAp)

Bachelor of Science in Applied Mathematics
University Average Grade (GPA): 3.64

2014 - 2018: Instituto Federal do Rio Grande do Norte (IFRN)

Information technology technician, Integrated to High School
High School Average Grade (GPA) acumulado: 3.71

Professional Experience

jun/2021 - nov/2021: Internship - IBM Brazil

Area: Natural Language Processing; Repair and Publication of Language Data

jan/2021 - feb/2021: Summer Job - Bank BOCOM BBM

Area: Data Science, Credit Analysis and Automation for Financial Data

aug/2019 - jul/2021: Scientific Initiation - PICME/CNPQ

Area: Natural Language Processing; Semantic Representations and Ontologies

Events Participation

sep/2024: First SaC3

Area: Modeling and Numerics in Epidemiology

sep/2024: XLII CNMAC

Area: Applied and Computational Mathematics

mar/2024: XIV BrazOpt

Area: Theoretical and Computational Continuous Optimization

fev/2024: EAGxLatinAmerica 2024

Area: Effective altruism; AI Safety and AI Governance

fev/2024: Condor Camp 2024

Area: Career Acceleration; AI Safety and AI Governance

jan/2024: Tropical Probabilistic AI School 2024

Area: Probabilistic Machine Learning and Artificial Intelligence

sep/2019: IAASA Systems Analysis and the Americas Conference

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aug/2019: IMPA 32th Brazilian Mathematics Colloquium

Area: 32th Brazilian Mathematics Colloquium

Posters and Publications

Fredson S. S. Aguiar, and Maria S. Aronna. A Learning-Based Model Predictive Control Framework with an State Observer for Epidemic Mitigation. In XLIII National Congress of Applied and Computational Mathematics (CNMAC 2024). In Proceeding Series of the Brazilian Society of Computational and Applied Mathematics, v. 11, n. 1, 2025. <https://proceedings.sbmac.org.br/sbmac/article/view/4896>

Hugo Gonalo Oliveira, Fredson Silva de Souza Aguiar, and Alexandre Rademaker. On the Utility of Word Embeddings for Enriching OpenWordNet-PT. In 3rd Conference on Language, Data and Knowledge (LDK 2021). Open Access Series in Informatics (OASlcs), Volume 93, pp. 21:1-21:13, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2021) <https://doi.org/10.4230/OASlcs.LDK.2021.21>

Projects and Research

Fredson S. S. Aguiar. A Case Study on Inverse Optimal Control and Model Predictive Control for Autonomous Decision Making Under Timely Distributional Shift. Condor Fellowship. In progress. [Link](#).

Relevant Knowledge

Data Science; Neural Networks and Deep Learning; Reinforcement Learning; Optimal Control and Dynamic Programming; Mathematical Modelling; Applied Mathematics.

Extra-curricular Activities

aug/2024 – current: Teaching Assistant– FGV/EMAp

Area: FGV/EMAp PhD Level Introduction to Functional Analysis

mar/2024 – jun/2024: Teaching Assistant– FGV/EMAp

Area: FGV/EMAp PhD Level Qualitative Theory of ODEs

aug/2023 – dec/2023: Teaching Assistant – FGV/EMAp

Area: FGV/EMAp Master Level Multivariate Analysis

aug/2023 – dec/2023: Teaching Assistant – FGV/EMAp

Area: FGV/EMAp Undergraduates Partial Differential Equations

mar/2023 – jun/2023: Teaching Assistant – FGV/EMAp

Area: FGV/EMAp Undergraduates Complex Calculus

aug/2022 – dec/2022: Teaching Assistant – FGV/EMAp

Area: FGV/EMAp Undergraduates Real Analysis

aug/2020 – dec/2020: Teaching Assistant – FGV/EMAp

Area: FGV/EMAp Undergraduates Discrete Mathematics

feb/2020 – jun/2020: Teaching Assistant – FGV/EMAp

Area: FGV/EMAp Undergraduates Vectorial Calculus

Volunteer Activities

aug/2023 – current: Coordinator – FGV/SEPEMAp

Area: FGV/EMAp Graduate Student Seminars

feb/2020 – nov/2020: Volunteer Teacher - Amplia FGV

Area: FGV/Amplia Social Project Volunteer Teacher