# 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 it's applications.

### **Academic Training**

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

Master's Degree in Mathematical Modeling

University Average Grade (GPA): N/A

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

ian/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: 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

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## **Relevant Knowledge**

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

#### **Relevant Publications**

Hugo Gonçalo 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 (OASIcs), Volume 93, pp. 21:1-21:13, Schloss Dagstuhl – Leibniz-Zentrum für Informatik (2021) https://doi.org/10.4230/OASIcs.LDK.2021.21

### **Relevant Projects**

Fredson S S Aguiar. Research Proposition: A case study on Inverse Optimal Control under timely distributional shift. Condor Fellowship. In progress. <u>Link</u>.

Fredson S S Aguiar. Optimal Control Theory towards Safe Reinforcement Learning: a comprehensive review. In progress. Condor Fellowship. Link.

Fredson S S Aguiar. Implementation of an update flow and experiments using word embeddings and analogy for the enrichment of the OpenWordnet-Pt. 2021. Undergraduate monography (portuguese). Link.

#### **Extra-curricular Activities**

aug/2024 - current: Coordinator - FGV/SEPEMAp

Area: FGV/EMAp PhD Introduction to Functional Analisys

mar/2024 - jun/2024: Teaching Assistant - FGV/SEPEMAp

Area: FGV/EMAp PhD Qualitative Theory of ODEs

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

Area: FGV/EMAp Masters Multivariate Analysis

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

Area: FGV/EMAp Undergrads Partial Differential Equations

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

Area: FGV/EPGE Undergrads Computing for Economy

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

Area: FGV/EMAp Undergrads Complex Calculus

aug/2022 - dec/2022: Teaching Assistant - FGV/EPGE

Area: FGV/EPGE Undergrads Computing for Economy

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

Area: FGV/EMAp Undergrads Real Analysis

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

Area: FGV/EMAp Undergrads Discrete Mathematics

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

Area: FGV/EMAp Undergrads 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