

Tiago da Silva

MASTER'S STUDENT IN MACHINE LEARNING

☎ +55 48 98863-8304 | ✉ tiago.henrique@fgv.br | 📷 tiagodasilva | 🌐 tiagodasilvah

Education

School of Applied Mathematics at FGV (EMAp - FGV)

M.SC. IN MATHEMATICAL MODELLING

RJ, Brazil

Mar. 2024 - ongoing

- Got a fully-funded scholarship. Currently living in RJ. However, I am **willing to move** for impactful work and **proceed remotely** with my Master's.
- Advisor: Diego Mesquita

School of Applied Mathematics at FGV (EMAp - FGV)

B.SC. IN DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

RJ, Brazil

Feb. 2020 - Dec. 2023

- Got a fully-funded scholarship given to students with recognized success in national scientific olympiads.
- Advisor: Diego Mesquita
- Title: Revisiting Forward-looking GFlowNets
- GPA: 9.9 / 10 — 1st in class.

Federal Institute of Santa Catarina (IFSC)

HIGH SCHOOL-INTEGRATED CHEMISTRY TECHNICIAN COURSE

SC, Brazil

Mar. 2016 - Dec. 2019

- Advisor: Eduardo Niehues
- Title: Production and physicochemical characterization of citrus melomel using honey from Apis Mellifera bees

Work Experience

MMD Serviço de Desenvolvimento de Softwares LTDA (Rei do Pitaco)

DATA SCIENCE INTERNSHIP

SP, Brazil

Jan. 2023 - Jul. 2023

- Designed predictive models to define the opening lines of bets on the outcomes of sport events (bookmaking)
- Implemented Bayesian models to continually refine the betting prices based on the financially expressed guesses of the bettors
- Deployed and upheld the created models within applications serving thousands of concurrent users
- Competent with Python, Google BigQuery, Snowflake, Airflow, MLFlow, scikit-learn, Stan, macOS

Green AI Lab

RESEARCH ASSISTANT UNDER SUPERVISION OF DIEGO MESQUITA

FGV, RJ, Brazil

Ago. 2022 - Now

- Work mostly focused in the development of scalable Bayesian inference methods such as Variational Autoencoders (VAEs), Generative Flow Networks (GFlowNets) and Bayesian Graph Neural Networks (GNNs)
- Apply these methods to diverse scientific endeavors ranging from solving partial differential equations through physically informed neural networks (PINNs) to discovering causal diagrams to uncover the underlying causal relationships within a data set
- Competent with machine learning frameworks — PyTorch, NumPy, GPyTorch, PyTorch Geometric, TensorFlow, Keras — and scientific writing

School of Applied Mathematics

TEACHING ASSISTANT

FGV, RJ, Brazil

Mar. 2021 - Now

TAing in the undergraduate courses of Data Visualization and Exploratory Data Analysis (2021.1), Linear Algebra (2021.2), Probability Theory (2022.1), Statistical Inference (2022.2), Machine Learning (2023.1), Time Series (2023.2)

Visual Data Science Lab

RESEARCH ASSISTANT UNDER SUPERVISION OF JORGE POCO

FGV, RJ, Brazil

Ago. 2020 - Dec. 2022

- Developed extensions to Jupyter Notebooks to seamlessly integrate them with JavaScript-based visualizations tools such as D3 and Vega-Lite
- Implemented a framework to detect legends within scientific visualizations using object-recognition methods as RCNN, Fast-RCNN, YOLOv5 and YOLOv7.
- Continually supported the development and maintenance of an open-source library for reverse engineering visualizations (REV)
- Designed a web application with Flask to manually label a set of images tailored to fine-tuning and validating object detection models
- Competent with Python, JavaScript, Flask, Dash, D3, SQL, Vega-Lite, React, Linux

Honors & Awards

NATIONAL COMPETITIONS

- | | | |
|------|---|--------|
| 2020 | First place , School of Applied Mathematics's entrance exam | Brazil |
| 2019 | Highest score nationwide , Brazilian Mathematical Olympiad of Public Schools | Brazil |
| 2018 | Highest score nationwide , Brazilian Mathematical Olympiad of Public Schools | Brazil |
| 2018 | Gold medal , Brazilian Chemistry Olympiad | Brazil |
| 2017 | Gold medal , Brazilian Mathematical Olympiad of Public Schools | Brazil |

STATE COMPETITIONS

- | | | |
|---------|---|------------|
| 2019 | William Glenn Whitley Prize , achieving the highest score at the State Mathematical Olympiad | SC, Brazil |
| 2018 | Gold medal , State Mathematical Olympiad | SC, Brazil |
| 2016-19 | Gold medal , State Chemistry Olympiad. Highest score in 2019. | SC, Brazil |