# GUSTAVO DE MARI PEREIRA

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#### **S**UMMARY

10+ years of experience in ML and AI, I started doing Kaggle competitions a decade ago. Experience working with large-scale databases and building ML pipelines. Founder of 2 companies, currently researching Reinforcement Learning at IME-USP.

#### **E**DUCATION

## M.S. Computer Science, University of Sao Paulo

Jan, 2021 - Present

Institute of Mathematics and Statistics (IME-USP)

Dissertation name: "Goal-oriented Reinforcement Learning for Stochastic Shortest Paths with Dead-Ends"

Research topics: Machine Learning, Reinforcement Learning, Probabilistic Planning, Deep Reinforcement Learning

Advisor: Leliane Nunes de Barros

**B.S. Computer Engineering**, Faculdade de Informática e Administração Paulista (FIAP)

Jan, 2008 - Dec, 2012

Dissertation name: "Neural networks applied to higher education evasion"

Research topics: Machine Learning, Neural Networks, Open Data, Higher Education, Evasion, Churn reduction

Advisor: Reinaldo Burian

## WORK EXPERIENCE

## Founder & Data Scientist, Providentia

Jan, 2016 - Present

- Engineered a demand forecasting platform using Machine Learning models, tailored for logistics and manufacturing
- Developed advanced time series forecasting models encompassing exponential smoothing, ARIMA, quantile regression, gradient boosting, recurrent neural networks (LSTM and GRU)
- Created the back-end and data-pipeline using technologies like Node.js, AngularJS, MongoDB, PostgreSQL, and RabbitMQ
- Consulting in Machine Learning and Artificial Intelligence projects

#### Founder & Software Engineer, Rapi.do

Oct. 2013 - Dec. 2015

- Created a platform to connect motorcycle couriers, businesses, and individuals with Node.js, MongoDB, and AngularJS
- Developed a mobile app for couriers and users, using iQuery Mobile

## Data Engineer, Santander Bank

Mar, 2011 - Jul, 2014

- Consulting in 30+ statistical modeling and data engineering projects, impacting 10+ million Santander Bank clients
- Managed, reviewed, and enhanced ETL pipelines using SQL and PL/SQL
- Crafted interactive dashboards and reports using Excel and Pentaho, enabling data analysis and actionable insights
- Pioneered Wiki CRM, enabling analysts to document project details, ETL metadata, and dataset information

## Software Engineering Intern, Brazilian Federal Revenue Office

Jul, 2010 - Mar, 2011

- Produced reports for the Brazilian Federal Revenue Office, utilizing BI tools such as Pentaho and Jaspersoft iReport
- Engineered a Java-based communication scheduling tool to streamline inter-departmental interactions
- Constructed administration panels for internal servers, employing HTML, CSS, and Python

## **S**KILLS

Languages Python, C/C++, Go, R, Julia, Javascript and Java

Data pandas, numpy, matplotlib, seaborn, SQL, PySpark, Oracle, MySQL, MongoDB, PostgreSQL and pgvector
 ML/AI scikit-learn, xgboost, Keras, Tensorflow, PyTorch, Hugging Face Transformers, LLMs, RAG, Stable-baselines3
 Cloud Amazon Web Services (AWS), Google Cloud Platform (GCP), Microsoft Azure

Tools Git, Docker

Techniques
Tools

## ADDITIONAL INFORMATION

• Open-source contributions: Scikit-learn, RabbitMQ, TechEmpowerBenchmarks, MEAN.JS, Open Knowledge Foundation

Machine Learning, Deep Learning, Reinforcement Learning, Inverse Reinforcement Learning, Linear Programming

- Conference Volunteering/Attendance: NeurIPS 21, 22, 23, 24; ICLR 22; ICML 21; ICAPS 21
- Academic Contributions: TA of Introduction to Computer Science 2022 (IME-USP); Website for Special Comission of Artificial Intelligence from Brazilian Computing Society
- Personal Projects: gustavodemari.com.br/projects