Guilherme de Sousa (he/him)

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SUMMARY

- PhD Candidate in quantum physics, statistical mechanics and machine learning
- Data Analytics and Data Science experience with focus on research and development
- Python enthusiast with +8 years of experience, including Data Science and Machine Learning

EXPERIENCE

3M, Graduate Data Science & Engineering Intern   **Summer 2023**

Consumer Business Group, Digital Hub

- Worked with retailer's sales data to drive insights for store management
- Developed forecasting models to predict sell-out data
- Improved 3M Visual Attention Systems using computer vision
- Worked with Databricks, Azure, Git, pandas, OpenCV, C++

National Institute of Standards and Technology, Graduate Research Associate   **2023-present**

Laser Cooling and Trapping, Ian Spielman Group

- Developed machine learning algorithms to estimate temperature and number of atoms
- Trained and tested classification and regression neural networks (pyTorch, Optuna)

University of Maryland, Graduate Research Assistant   **2020-present**

Department of Physics, Group of Professor Christopher Jarzynski

- Implemented a quantum system modelling using stochastic processes
- Created numerical simulations of stochastic trajectories for Brownian systems using Python and Julia

Experian (Serasa), Data Analytics Jr   **2019-2019**

- Translated SAS code to Python (PySpark) for credit score calculation
- Integrated Python, SQL and Hadoop for Big Data project
- Implemented Python codes for Sandbox application (scalable Big Data)

EDUCATION

University of Maryland

Physics, PhD Candidate   **2019-present**

Physics, Master of Science   **2023**

University of São Paulo

B.S. in Computational Physics, High honors   **2018**

SKILLS

Physics: Statistical physics, stochastic simulations, Brownian particle

Data Analysis: Python (numpy, pandas, pyTorch, pySpark, openCV), SQL, Databricks, Azure, Git

PROJECTS

- Simulation of FIFA Men's World Cup based on FIFA Elo Ranking dataset (Github)
- Data Analysis (Github) and Data Visualization of messages exchanged in Messenger (Facebook/Meta)