

Gabriel Victorino Cardoso

Machine learning researcher

Professional Experience

- Jun. 2021 – **PhD student**, *CMAP / Ecole Polytechnique*, Sequential Monte Carlo methods and Generative models, with applications to cardiology.
Jun. 2024
Phd advisor : Eric Moulines.
- Jan. 2020 – **Lead Data Scientist**, *Volta Medical*, Leader of the R&D team that specializes in using deep learning and machine learning techniques on medical data (ECG and intracardiac electrograms).
Feb. 2021
- Dec. 2018 – **Data Scientist**, *Volta Medical*, Part of the R&D team that specializes in using deep learning and machine learning techniques on medical data (ECG and intracardiac electrograms).
Jan. 2020
- Oct. 2017 – **Data Scientist**, *Kyump / Capcar*, In charge of the pricing and advertise recognition algorithms (Neural Networks, NLP, Data Harvesting, Database Architecture, etc...).
Dec. 2018
- March 2017–Sep. 2017 **Research Internship**, *Jalgos*, Data Scientist internship at Jalgos, Artificial Intelligence lab. Main subjects : Topological Data Analysis and Anomaly Detection/Predictive Maintenance.

Education

- 2014–2017 **Ecole Polytechnique**, *Engineer degree*, promotion X2013, French Engineering Degree - Equivalent of Master Degree.
- 2016–2017 **Isae-Supaero**, *Double degree Polytechnique-SUPAERO*, Major in Data Science, minor in Autonomous Systems, As part of the fourth year of Polytechnique's Engineer Curriculum.
- 2011–2013 **Undergraduate in applied mathematics**, *Federal University of Rio de Janeiro (UFRJ)*, Rio de Janeiro, RJ, Brazil.

Selected Publications

- MCGDiff **Monte Carlo guided Diffusion for Bayesian linear inverse problems**, *ArXiv / Accepted Oral presentation ICLR 2024*, <https://arxiv.org/abs/2308.07983>.
- PPG **Particle-based, Rapid Incremental Smoother Meets Particle Gibbs**, *Statistica Sinica 2022*, https://www3.stat.sinica.edu.tw/preprint/SS-2022-0215_Preprint.pdf.
- PPG Learning **State and parameter learning with PARIS particle Gibbs**, *International Conference on Machine Learning (ICML) 2023*, <https://proceedings.mlr.press/v202/cardoso23a.html>.

BR-SNIS **BR-SNIS : Bias Reduced Self-Normalized Importance Sampling**, *NeurIPS* 2022, <https://doi.org/10.48550/arXiv.2207.06364>.

Skills

Programming

Languages, *Python (Pytorch, JAX, Sklearn, SQLAlchemy).*

Programs, *Matlab, Scilab, Docker, Jenkins.*

Database, *Postgresql, MongoDB.*

Languages

Portuguese, *First language.*

French, *Fluent, TCF, C2 level.*

English, *Fluent, TOEIC score 975.*

Spanish, *Basic understanding.*