



Victor Fernando Lopes de Souza

Engineering Student at CentraleSupélec

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About Me

Passionate for innovation and technology. Interested in approaching complex problems and grasping complex concepts. Enthusiast of Mathematics, Computing, Artificial Intelligence, Machine Learning, System Modeling and Control, Philosophy, Quantum Physics, Financial Markets, Cybersecurity, Blockchain and Discrete Automation.

Skills

Development and Software

- Python
- Pandas
- Numpy
- Tensforflow
- Keras
- Matlab
- Simulink
- Git
- JavaScript
- Linux
- TEX
- R
- Java
- C++
- PHP
- SQL

Academical Background

- Control Systems
- Temporal Logic
- Probabilistic Models
- Optimization
- Automata
- Algorithms

Languages

- Portuguese (native)
- English (C1)
- French (B2)
- Spanish (B2)

Education

- 2022-2023 Université Paris-Saclay
Master in Systems, Signals and Image Processing
Gif-Sur-Yvette (FR)
- 2021-2023 CentraleSupélec
Engineering, with mention in Control
Gif-Sur-Yvette (FR)
GPA: 3.65/4
- 2018-2023 UFSC - Universidade Federal de Santa Catarina
Control and Automation Engineering
PAM - Advanced Mathematics Program
Florianópolis (BR)
GPA: 3.58/4
GPA: 3.86/4
- 2021-2022 Paris IV - Sorbonne Université
Bachelor's degree in Philosophy
Paris (FR)
- 2014-2017 IFSC - Instituto Federal de Santa Catarina
Engineering Technician in Electronics
Florianópolis (BR)

Work Experience

- 2020-2021 Student Researcher in Neural Nets
at EMBRAPPII, in partnership with Central Energia (R&D on trading)
Florianópolis (BR)
Worked on building, training, and evaluating LSTM networks regarding the prediction of precipitation data for energy trading
- 2018-2021 Student Researcher in Algebraic Topology
at IMPA (Brazilian Institute of Pure and Applied Mathematics)
Florianópolis (BR)
Research on advanced topics related to Geometric Group Theory
- 2018-2019 Calculus Teaching Assistant
at the Mathematics Department, UFSC
Florianópolis (BR)
Developed PHP, Shell, BASIC and Kernel scripts to automate tasks related to the management, monitoring and control of the backbone
- 2016-2017 Intern as Web Developer
at Oi S.A. (third largest telecommunication company in Latin America)
Florianópolis (BR)
Developed PHP, Shell, BASIC and Kernel scripts to automate tasks related to the management, monitoring and control of the backbone

Projects

- 2022 Training Neural Networks with Kalman Filters
Implementation of modern control methods for training Neural Nets and use of the Kalman filter as an optimization algorithm
Gif-Sur-Yvette (FR)
- 2022 Exploring portfolio optimization methods, with BNP
Construction, Implementation and Evaluation of different portfolio allocation methods
Gif-Sur-Yvette (FR)
- 2022 System for inform on cancer, with Health Guide AI
Testing of different recommendation algorithms for this purpose
Gif-Sur-Yvette (FR)
- 2021-2022 Neural Nets: Attacks and Robustness, with SystemX
Study and implementation of some attack methods on NN systems
Gif-Sur-Yvette (FR)

Honours and Awards

- 2021 BRAFITEC, Merit Scholarship for Double Degree in France
- 2019 Qualified to Final Phase, OBMU (National University Maths Olympiad)
- 2018 Freshman Award, OEI (Organization of Ibero-American States)
- 2017 Silver Medal, OBMEP (National High School Mathematics Olympiad)
- 2016 Silver Medal, OBMEP (National High School Mathematics Olympiad)
- 2014 Honourable Mention, OBMEP (National High School Maths Olympiad)