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.

Looking for a final year internship starting in May 2023.

Enthusiast of Mathematics, System Modeling, Control Systems and Discrete Automation.

Skills

Good Mathematical Background and knowledge in Control's Systems, Automata and Discrete-Event's Systems.

Multiple experiences on Python, LaTeX, Matlab, Simulink, Linux, Git, R, Ladder, Java, C++, AutoIt and BASIC.

Experience on data analysis and neural nets using Pandas, Numpy, Tensorflow and Keras.

Experience on Web developing using PHP, HTML, CSS, SQL and JavaScript.

Languages: Portuguese (mother tongue), English, French and Spanish.

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)
2018-2023	**UFSC - Universidade Federal de Santa Catarina** Control and Automation Engineering PAM - Advanced Mathematics Program	Florianópolis (BR)
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 EMBRAPII, in partnership with Central Energia (R&D on trading)* Worked on building, training, and evaluating LSTM networks regarding the prediction of precipitation data for energy trading	Florianópolis (BR)
2018-2021	**Student Researcher in Algebraic Topology** *at IMPA (Brazilian Institute of Pure and Applied Mathematics)* Research on advanced topics related to Geometric Group Theory	Florianópolis (BR)
2018–2019	**Calculus Teaching Assistant** *at the Mathematics Department, UFSC* Developed PHP, Shell, BASIC and Kernel scripts to automate tasks related to the management, monitoring and control of the backbone	Florianópolis (BR)
2016–2017	**Intern as Web Developer** *at Oi S.A. (third largest telecommunication company in Latin America)* Developed PHP, Shell, BASIC and Kernel scripts to automate tasks related to the management, monitoring and control of the backbone	Florianópolis (BR)

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)