

# Jesuino Vieira Filho

jesuino.vf@gmail.com ◦ github.com/jesuinovieira ◦ linkedin.com/in/jesuinovieira

## Education

---

### MSc in Computer Science (AI Specialization)

*Université de Montréal*

2025 – Present  
Montréal, Canada

- Admitted for Fall 2025 intake

### BSc in Mechatronics Engineering

*Federal University of Santa Catarina*

Aug. 2016 – Sep. 2022  
Joinville, Brazil

- Average grade: 8.68/10.00 (2nd in class, top 5%)
- Completed two graduate-level courses in Data Science and Machine Learning (Grade: 9.50/10.00)
- Bachelor's thesis: "Comparison of machine learning methods for short-term urban water demand forecasting in a coastal tourist city" (Advisor: Pablo Andretta Jaskowiak; Grade: 10.00/10.00)

## Research Interests

---

AI4science, representation learning, graph neural networks, generative models, reinforcement learning

## Professional Experience

---

### Data Scientist & Software Developer

*IconPro GmbH*

Aug. 2021 – Apr. 2025  
Remote

- Developed a library of custom Spark transformers, estimators, and utility functions
- Improved model reliability and explainability with SHAP, conformal predictions, and OOD detection
- Optimized a distributed data pipeline on Kubernetes, reducing runtime by 40%
- Designed a benchmarking tool to evaluate an RL optimization algorithm against traditional methods

### Data Scientist & Software Developer (Intern)

*IconPro GmbH*

Feb. 2020 – Aug. 2021  
Aachen, Germany

- Developed a time series analysis and forecasting (TSAF) library for predictive maintenance
- Implemented a statistical process control (SPC) module to monitor manufacturing processes
- Built an ETL pipeline to stream data from manufacturing machines into a database

## Research & Teaching Experience

---

### Research Assistant at LISHA

*Federal University of Santa Catarina*

Aug. 2018 – Jul. 2019  
Joinville, Brazil

- Conducted computer vision research, evaluating deep learning models for human detection

### Teaching Assistant for Programming II

*Federal University of Santa Catarina*

Aug. 2017 – Dec. 2017  
Joinville, Brazil

- Course covered data structures and sorting algorithms taught in C

## Publications († Peer-reviewed, \* First author)

---

† **Vieira Filho J\***, Scortegagna A, de Sousa Dias Vieira AP, Jaskowiak PA. Machine learning for water demand forecasting: Case study in a Brazilian coastal city. *Water Practice & Technology*, 1 May 2024, 19 (5), 1586–1602

**Vieira Filho J\***, Jaskowiak PA. Comparação de métodos de deep learning pré-treinados da biblioteca OpenCV para detecção de pessoas em ambientes internos. *Revista Eletrônica de Iniciação Científica em Computação* 2020, 18 (4)

## Further Education

---

**NeuroAI** 14 Jul. 2025 – 25 Jul. 2025 (Forthcoming)  
*Neuromatch Academy* Remote

**Spark on Kubernetes** 17 Oct. 2023 – 18 Oct. 2023  
*Data Engineering Academy* Remote

**School on Complex Networks & ML in Neuroscience** 22 May 2023 – 26 May 2023  
*ICTP South American Institute for Fundamental Research* São Paulo, Brazil

**Writing & Publishing Scientific Papers** 12 Jul. 2021 – 20 Aug. 2021  
*Federal University of Santa Catarina* Joinville, Brazil

## Honors & Awards

---

**Bourse d'exemption UdeM** Sep. 2025  
*Université de Montréal*

**Outstanding Academic Performance** 1st Semester, 2020  
*Federal University of Santa Catarina*

**Institutional Scientific Initiation Scholarship Program (PIBIC)** Aug. 2018 – Jul. 2019  
*National Council for Scientific and Technological Development (CNPq)*

## Selected Skills

---

**Programming Languages**  
Python, SQL, C++, C, LaTeX, Shell scripting, MATLAB

**Machine Learning Libraries**  
PyTorch, scikit-learn, Apache Spark, OpenCV, pandas, NumPy

**Infrastructure & Development Tools**  
Docker, Kubernetes, Git, Linux

**Languages**  
Portuguese (Native), English (C1), German (A2), French (A1–A2, in progress)