ES, Brazil

(+55) 27998719162
karinassini@gmail.com

Karina Assini Andreatta

EDUCATION

Federal University of Espírito Santo	**Espírito Santo, Brazil**	**Marc. 2023 – 2025**

- **Ph.D.** Computer Science
- Major: Optimization and Computational Modeling| Advisor: Maria Cláudia Silva Boeres

Federal Institute of Espírito Santo	**Espírito Santo, Brazil**	**Fev. 2019– Dez. 2020**

- **M.Sc.** Sustainable Technologies – Machine Learning and Optimization
- Major: Data Science | Advisor: Reginaldo Nunes
- Global weighted average grade: 94.83/100.0

Federal University of Espírito Santo	**Espírito Santo, Brazil**	**Marc. 2012– Ago. 2017**

- **B.Sc.** Electrical Engineering
- Global weighted average grade: 8.0/10.0
- Undergraduate thesis: 10.0/10.0

ADDITIONAL FORMATION

Coursera/Udemy/Alura	**Current**

- Taking courses in optimization, machine learning, and MLOps.
- Major: Data Science

Anhembi Morumbi University	**Ago. 2020– Ago. 2021**

- Specialization in Data Science
- Major: Data Science
- Global weighted average grade: 9.79/10.0

Udacity	**Jan. 2021– Abr. 2021**

- Nanodegree in Data Science
- Major: Data Science

LANGUAGES

- **Portuguese:** native
- **English:** professional proficiency
- **Spanish:** limited professional proficiency

EMPLOYMENT

Tech Lead - Senior Data Scientist	**Arcelormittal**	**Ago. 2021 - present**

Technical leadership of a 12-person team, including Data Scientists, Data Engineers, and Machine Learning Engineer. Developed and managed an end-to-end project that saved over $10M. This project included ongoing contact with the business unit to understand the problem, modeling using machine learning and computational optimization (operational research and metaheuristics), and final implantation (tool industrialization) using MLOPs and CI/CD techniques. The industrialization of this project included all the structuring of the company's data science department, such as the implementation of the MLOps structure, continuous support and decision making with stakeholders. Participation in all development processes of these methods. Currently involved in the development of a project to optimize fuels and raw materials for sintering machines and as technical leader in other projects involving steel production processes and highly complex logistics. Participated in a training for future managers conducted by global managers of Arcelormittal. The training started in 2023.

Technology Stack: Machine Learning, Deep Learning, Time Series, Advanced Statistics, Mathematical Optimization, Metaheuristics (Simulated Annealing, Genetic Algorithm, Tabu Search, ACO), SPARK, Python, SQL, Fast API, MLOps, DevOps, Git, Scrum, Azure, Databricks, CI/CD, Technical Recruitment, Leadership.

Senior Data Scientist Expert – Freelancer   **Cognitivo.AI**   **Marc. 2022 - Aug. 2022**

Development of a project aimed at providing price recommendations for all products offered by the auction house, which included more than 50 different product categories.

Technology Stack: Machine Learning, Advanced Statistics, Python, NLP, Label Studio, AWS, BERT fine tuning; Scikit-learn; NLTK.

Data Scientist   **Densyx**   **Fev. 2017 - Ago 2021**

Complete development and management of project cycles, from specification to implementation, final production, and ongoing support. Development of several projects in the field of data and machine learning. Development of a fuzzy logic-based system. Installation of the developed systems in several multinational companies. Conducting training courses and technical seminars. Coaching and mentoring for Data Scientists. Implementation of a system that became a product: https://ieeexplore.ieee.org/document/9317080. Development of front-end web applications.

Technology Stack: HTML, CSS, Bootstrap, Scrum, Web Design, Web Development, SQL, PostgreSQL, MongoDB, CakePHP, PHP, Laravel, C++, OPC Server, R, Python, Machine Learning, Deep Learning, NLP, Business Analytics, Advanced Statistics, Time Series.

Engineering Intern   **Zucchi Luxury Stones**   **Fev. 2016 - Fev. 2017**

Development of predictive, preventive, and corrective maintenance approaches.

Technology Stack: SAP, SQL, Business Analytics, Advanced Statistics.

Researcher   **Instituto Federal do Espírito Santo**   **Fev. 2019 - Dez. 2020**

Design and development of Soft Sensor Application in Cement Industry | Supervisor: Reginaldo Nunes

Researcher – Volunteer project   **Universidade Federal do Espírito Santo**   **Mar. 2015 – Jun. 2017**

Aero Design SAE Brazil: Part of the team responsible for developing a prototype radio-controlled aircraft. Responsible for analyzing and collecting data to gain knowledge to improve flight performance. Developed an embedded electronic system using a Texas Instruments microcontroller.

Researcher – Volunteer project   **Universidade Federal do Espírito Santo**   **Dez. 2012 – Fev. 2015**

Baja SAE Brazil: Part of the team responsible for developing a single-seat vehicle from scratch.

Competencies IN Technologies

- C/C++, HTML, CSS, Bootstrap, CakePHP, PHP, Laravel Web Development, SQL, Python, R, SPARK, Gurobi
- Mathematical Programming, Integer Linear Programming, Robust Optimization, Network Optimization
- Git, Scrum
- OPC Server, PostgreSQL, MongoDB, Azure, AWS, CI/CD, Fast API, MLOps