Marciano Saraiva

Software Developer | Specialist in Data Science and Artificial Intelligence

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Profile

Software developer with over seven years of experience in AI-based solutions, data analysis, and full-stack development. Led the development of products from concept to delivery using technologies such as remote sensing and predictive modeling. Committed to innovation, operational efficiency, and delivering impactful results.

Core Skills

Python, Django, Machine Learning, Deep Learning, Data Science, Geospatial Analysis, Computer Vision, Software Engineering, Product Management

Work Experience

Brain Agriculture

Solutions Consultant 07/2022 – Present

- Led the creation of Crop Monitor for Serasa Experian, an advanced platform integrating satellite data, weather information, and machine learning to deliver accurate forecasts on crop health and productivity.

Senior Software Development Analyst 10/2021 – 06/2022

- Designed and optimized the geospatial data infrastructure for the Agribusiness unit, improving ESG analysis workflows and agricultural monitoring.

Agrosatélite Geotecnologia Aplicada

Senior Software Development Analyst 10/2019 – 09/2021

- Developed SIMFaz 2.0, enhancing agricultural monitoring with geospatial data to support credit decision-making.
- Built the soybean traceability system for Coamo, ensuring transparency and sustainability in the supply chain.
- Contributed to Brazil's Fourth National Communication to the UNFCCC, analyzing greenhouse gas emissions using satellite data processing.
- Implemented the SSEBop evapotranspiration model in collaboration with USGS and ANA, publishing results in a technical report.
- Co-authored the study "Irrigated Agriculture Hubs in Brazil", mapping irrigated regions using satellite data.
- Analyzed agriculture and planted forests from 1985 to 2018 for MapBiomas, achieving 91% user accuracy and 90% producer accuracy for agriculture, and 93% and 66% for planted forests in 2018.

Mid-level Software Development Analyst 05/2018 – 09/2019

- Identified center-pivot irrigation using high-resolution Planet imagery and deep learning, achieving 88% user accuracy and 99% producer accuracy.
- Mapped 11.2 million hectares of sugarcane: 79.5% fertigated, 15.5% with rescue irrigation,

4.2% with deficit irrigation, and 0.8% with full irrigation.
- Performed annual analysis of agricultural and forest classes from 1985 to 2018 for MapBiomas Collections 4.0 and 4.1, achieving 83% user accuracy and 87% producer accuracy for agriculture, and 84% and 71% for planted forests in 2018.

Trainee Software Development Analyst 08/2017 – 04/2018
- Analyzed agricultural and planted forest classes from 1985 to 2017 for MapBiomas Collections 3.0 and 3.1, achieving 85% user accuracy and 88% producer accuracy for agriculture, and 92% and 57% for planted forests in 2017.

Education

Pontifical Catholic University of Minas Gerais
Postgraduate in Artificial Intelligence and Machine Learning 2020 – 2021

Pontifical Catholic University of Minas Gerais
Postgraduate in Data Science and Big Data 2019 – 2020

Federal University of Ceará
Bachelor's in Information Systems 2013 – 2016

Certifications

- Scrum Foundation Professional Certificate (SFPC)
- DevOps Essentials Professional Certificate (DEPC)
- Verified International Academic Qualifications

Technical Skills

Programming Languages: Python, JavaScript
AI & Machine Learning: TensorFlow, Keras, Scikit-Learn
Data Analysis: ETL, Statistical Modeling
Geospatial Technologies: Google Earth Engine, Remote Sensing
Databases: PostgreSQL, MongoDB
Web Development: Django, Node.js, Angular
Management: Scrum, Leadership, Problem Solving

Soft Skills

- Analytical and critical thinking to solve complex problems - Proactivity and a strong sense of responsibility with a results-oriented approach - Collaborative mindset with experience working in multidisciplinary teams

Languages

Portuguese (Native), English (Professional)