João Ataíde

Pernambuco, Brazil

Data Scientist | GeoAI, Computer Vision & Remote Sensing

Data Scientist with six years of experience in machine learning, deep learning, computer vision, GeoAI and remote sensing. Builds solutions using tabular data, time series, and optical and radar (SAR) imagery, covering data acquisition and preparation, modeling, validation, inference, MLOps and integration with enterprise GIS environments.

contato@joaoataide.com | www.joaoataide.com | linkedin.com/in/joaoataidee | github.com/jvataidee

PROFESSIONAL EXPERIENCE

Data Scientist

05/2026 – Present

Imagem Geosistemas

- ☐ Lead the technical design and delivery of data, GeoAI and computer vision solutions, from problem definition through architecture, validation and integration into the operational environment.
- ☐ Developed a pipeline for anomaly detection in Sentinel-1 SAR time series using TCN-v2, combining Sentinel-2 and optical change detection to identify changes and generate georeferenced alerts.
- ☐ Developed 10 m land use and land cover classification with Sentinel-2 and XGBoost, and an AHP (Analytic Hierarchy Process) multi-criteria model combining NDVI/EVI, proximity, territorial context and operational variables to prioritize critical areas.
- ☐ Design a water security solution using Sentinel-1/2 and a digital terrain model (DTM), including water body classification, water level and volume estimation, temporal analysis and integration with ArcGIS Enterprise/Image Server.

Data Science and Computer Vision Consultant

04/2026 – 07/2026

Automaxia

- ☐ Developed computer vision solutions for automated biomedical image analysis, with detection and segmentation models for identifying and quantifying structures.
- ☐ Compared YOLO and RF-DETR using image slicing, prediction fusion and systematic metric and error analysis to select the most suitable approach.
- ☐ Designed ML/DL experiments covering data preparation, validation and comparison of approaches, documenting results, observed limitations and technical recommendations.

Data Scientist

04/2024 – 05/2026

VEGA Monitoramento

- ☐ Built multitemporal pipelines in Python, Spark and Databricks, integrated with S3 and STAC, for data acquisition, mosaicking, cloud masking, temporal composites, spectral indices and processing of Sentinel-1/2, Landsat and MODIS.
- ☐ Developed an experimentation and training framework with U-Net, DeepLab, Mask R-CNN, MLP and LSTM, integrating Scikit-learn, TensorFlow/Keras, PyTorch, PyCaret, Optuna, cross-validation and experiment tracking.
- ☐ Developed Random Forest and neural network models for land use and land cover, native vegetation and deforestation, combining feature engineering, time series, class- and geography-based balancing, outlier handling, inference and change detection.
- ☐ Implemented workflows with SAM, statistical cubes, NDVI/EVI and SAR processing, automating ingestion, geospatial enrichment, quality control and product generation in a distributed environment.

Data Scientist / Computer Vision Engineer

10/2020 – 04/2024

Imagem Geosistemas

- ☐ Developed multi-sensor, multi-resolution solutions using CBERS-4A, Sentinel-1/2, ICEYE, Landsat, nighttime imagery, high-resolution imagery and drones for environmental, urban, agricultural and infrastructure applications.
- ☐ Developed detection, segmentation and classification models for rooftops, swimming pools, green areas, photovoltaic systems, firebreaks, infrastructure, roads, paving, and land use and land cover.
- ☐ Developed change detection and continuous monitoring solutions with optical and SAR data, integrating geospatial rules, models and automated alert generation.
- ☐ Built pipelines for data acquisition, image processing, training, inference and post-processing integrated with ArcGIS, including CycleGAN and time series for productivity.

TECHNICAL SKILLS

Python	PyTorch	TensorFlow
Scikit-learn	XGBoost	Random Forest
U-Net	DeepLab	Mask R-CNN
SAM	MLP	LSTM
GeoAI	Computer Vision	Remote Sensing
Time Series	Anomaly Detection	Change Detection
Sentinel-1/2	Landsat	CBERS-4A
SAR/ICEYE	STAC/SNAP	ArcGIS
QGIS	Databricks	AWS S3
MLOps		

EDUCATION

Master's in Computer Engineering

Universidade de Pernambuco | Petrolina, PE — 03/2026 – Present

Graduate Specialization in Computer Vision

STAR Research Institute | Online — 06/2026 – Present

MBA in Operations Research and Decision Making

BSBr – Business School Brasil (EASE BRASIL) | Online — 10/2021 – 07/2023

Graduate Specialization in Geoprocessing and Georeferencing

Universidade Federal Rural do Semi-Árido | Mossoró, RN — 10/2019 – 09/2021

Bachelor's in Civil Engineering

Universidade Federal Rural do Semi-Árido | Pau dos Ferros, RN — 03/2019 – 04/2021

Graduate Specialization in Business Intelligence, Big Data & Analytics

Universidade Norte do Paraná | Online — 01/2019 – 03/2021

TEACHING / AUTHORED COURSES

Instructor (Alura): Diffusion Models and Transformers (PyTorch)

Deep Learning / AI Engineering — 2025

SELECTED CERTIFICATIONS

- ☐ **Deep Learning Specialization**, DeepLearning.AI/Coursera
- ☐ **Fundamentals of Computer Vision & Image Processing in Python**, OpenCV University, 2023
- ☐ **YOLO+**, Augmented Startups, 2025

LANGUAGES

- ☐ **Portuguese**: Native
- ☐ **English**: Advanced (Professional)
- ☐ **Spanish**: Basic