João Henrique Flauzino

Target: Junior ML Engineer | Data Engineer

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Summary

Software developer focused on Python API integrations, automation and applied ML research. Seeking junior ML Engineering or Data Engineering roles. Based in Brazil; open to remote work.

Professional Experience

Tech4Humans — Junior Software Developer Oct 2025 – Present

- Develop Python automation and React-based customer support platforms, integrating APIs including Clicksign and Infocar for daily processing.
- Analyze HTTP requests issued by the platforms and reconstruct API workflows to build integration pipelines and automate operational tasks.
- Implemented batch ticket-resolution automation used in customer support operations.

Blinxel — Augmented Reality Mobile Developer
Jan 2023 – Jan 2024 | C# and Unity: AR mobile applications with dynamic scene loading and volumetric video optimization.

Applied Machine Learning Research

UNIFEI — Undergraduate Researcher, FAPEMIG-funded | STEAM Project
Jan 2026 – Present

- Contribute to data preparation, feature engineering, modeling, experiments, analysis and scientific writing for LiDAR-based wind-speed forecasting.
- Compare attention-based Seq2Seq LSTM, TCN and bidirectional variants against ARIMA, Random Forest and persistence, using TensorFlow and Optuna.
- Evaluate forecasts up to 6 hours ahead from 12-hour input windows, with chronological splits for training, validation and testing and per-horizon metrics.
- On the test set described in the manuscript submitted to SBSR, LSTM achieved $R^2 = 0.636$ and RMSE = 1.101 m/s, aggregated across 36 forecast steps. Coauthor of a manuscript submitted to SBSR; not yet published.

Selected Projects

File Sorter AI: file organization using a local pretrained model, a CLI/Qt GUI, reviewable plans and integrity-checked file operations.
ATLAS: Python work coordination with a JSONL transaction log, SQLite/FTS5 search and lease-based delivery with fencing. Deterministic core.
Itachuva (team): flood-risk mapping for Itajubá; Node/Express backend restructuring and ECMWF weather pipeline integration into climate services.
Ad-hoc deforestation reports (team): KNIME ETL via TerraBrasilis APIs joined to the BDIA geographic database; PostgreSQL modeling of deforestation by municipality, state and biome in an ad hoc dashboard.
Agent-assisted development: specifications, delegated implementation, review and artifact validation, including RAG development — indexed knowledge bases for agent retrieval.

Education and Skills

Bachelor's degree in Information Systems — Universidade Federal de Itajubá
2023 – Expected graduation: June 2027.
ML and data: Python, TensorFlow/Keras, scikit-learn, Optuna, time-series forecasting, SQL, PostgreSQL.
Software: REST APIs, React, Git, automation, agent-assisted development.
Languages: Portuguese (native); English (advanced).