

# Mateus Pereira da Silva

---

## Full Stack Software & Data Engineer

**Email:** [mateuspdasilva369@gmail.com](mailto:mateuspdasilva369@gmail.com) | **GitHub:** [tzpereira](https://github.com/tzpereira) | **LinkedIn:** [mateuspdasilva](https://www.linkedin.com/in/mateuspdasilva)

---

## Professional Summary

Full Stack Engineer with 4+ years of experience building scalable, cloud-native systems and data-driven applications.

Proven track record designing microservices, distributed systems, and machine learning pipelines.

Delivered solutions that reduced infrastructure footprint, optimized SQL queries by 50x, and enabled multi-billion-dollar supply chain decisions.

---

## Professional Experience

### Software & Data Engineer

#### VE3 – B2B Supply Chain & Data Intelligence Platform

*Aug 2022 – Present*

- Developed weekly/daily DRP/MRP dashboards (Python + Polars), directly contributing to securing a multi-billion-dollar annual revenue client.
- Refactored the Sales Forecasting Engine (Python + Spark):
  - Simplified workflows for 25+ models and hundreds of thousands of daily records
  - Reduced technical debt and improved maintainability, logging, and performance
- Designed and deployed the Sell-Out MPS microservice:
  - Go REST API orchestration
  - Python (AWS EC2 + S3, Polars) for high-volume numerical processing
  - React dashboards with interactive grids and charts
- Redesigned pricing hierarchy logic, replacing a heavy fixed-level system:
  - Reduced infrastructure footprint by up to 10% per client environment
  - Enabled flexible variable-based pricing across all hierarchy levels (global to SKU)
- Implemented an embedded BI solution, allowing users to run analytics and build dashboards directly inside the platform.
- Tuned SQL execution plans and ERDs, boosting dashboard performance by 75% and cutting query load by 50x.

- Built an observability framework (Prometheus, Grafana, Bash), reducing downtime with faster incident detection.
  - Delivered solutions adopted by market leaders across industries (food, consumer goods, electronics, manufacturing), supporting global-scale operational and strategic decisions.
- 

## Frontend Developer (Freelance)

### Self-Employed | Remote

Feb 2021 – Aug 2022

- Built responsive websites and landing pages with HTML, CSS, and JavaScript.
  - Collaborated directly with clients, translating requirements into user-friendly interfaces.
- 

## Selected Project

### Bandit Brain (2025)

**GitHub:** [tzpereira/bandit-brain](https://github.com/tzpereira/bandit-brain)

Full-stack API and dashboard for **Multi-Armed Bandit (A/B/n) experiments with temporal data**, enabling dynamic traffic allocation and decision optimization.

- Backend built with **FastAPI**, exposing REST endpoints for data ingestion, recommendations, and metrics, with **PostgreSQL** for persistence and analytics.
- Implemented **Epsilon-Greedy, UCB, Thompson Sampling, and Softmax** algorithms for adaptive allocation strategies.
- **Streamlit dashboard** for uploading historical data, running online simulations, and interactive visualization of experiment results.

**Tech stack:** FastAPI, PostgreSQL, Polars, Numpy, Streamlit, Plotly, Docker

---

## Technical Skills

**Languages:** Python, Go, JavaScript, TypeScript, Node.js, PHP

**Frontend:** React, Next.js, HTML5, CSS

**Backend:** REST APIs, Microservices, Asynchronous Processing

**Data & Machine Learning:** PostgreSQL, MySQL, Polars, Pandas, Forecasting Models

**DevOps:** Docker, AWS (EC2, S3), Linux, Prometheus, Grafana, Bash, NGINX, CI/CD

**Tools:** Git, Postman, Swagger, Webpack, Composer

**Methodologies:** Agile, Scrum, Cross-functional Collaboration

---

# Education

**B.Sc. in Computer Science – Estácio de Sá University**

---

## Languages

- Portuguese: Native
- English: Fluent
- Spanish: Beginner