Matheus M. Alfradique

Software Developer & Computer Science Undergraduate | São Paulo, Brazil | matheus.alfradique@usp.br *| +55 31 99867-7948 |* linkedin

Software developer with hands-on experience building scalable AWS data infrastructure and automation solutions. Passionate about solving complex technical problems, writing clean maintainable code, and delivering measurable business impact. Seeking early career opportunities to grow as a software engineer in a fast-paced, innovative environment.

Experience

Data Engineer/Data Analyst (promoted to JR Data Engineer, Dec 2025) *Itaú | Internship | São Paulo, Brazil | January 2025 – December 2025 | 12 months*

- **Process Optimization**: Decommissioned 7 out of 60 daily SQL/SAS routines through automation and process redesign, reducing manual workload by 30 minutes per day for mid-level analysts and improving operational efficiency.
- **Financial Impact Analysis**: Identified critical data inconsistencies revealing a gap in contractual fee payments worth R$500,000 monthly.
- **AWS Data Pipeline Development**: Design'ed and implemented an automated classification system using AWS Athena, Glue, and Step Functions to categorize payment gaps by reason, transforming ad-hoc manual analysis into systematic, actionable insights for business decision-making.
- **Data Integration Architecture**: Transformed fragmented and manual data movement challenges into an opportunity for impact by developing a standardized ETL pipeline (GlueLess) for seamless transfer from SharePoint files (CSV/XLSX) and legacy MS SQL Servers to AWS Athena using Glue/PySpark, achieving 42% cost reduction and 80% time savings for analysts.
- **Code Quality & Scalability**: Established reusable, team-specific components, eliminating code duplication and enabling rapid feature implementation without legacy code refactoring.

Algebra and Geometry Teacher *CPE | Volunteer | São Paulo, Brazil | February 2024 – Present | 23 months*

Teach Geometry (2024) and Algebra (2025) at Cursinho Popular EACH USP - university entrance exam preparation course. Manage four weekly classes with 40+ students each tailored for ENEM and college entrance exam requirements.

Projects

GlueLess *Low-code Python library for seamless data integration between file sources, MS SQL Server, and AWS Glue | In expansion*

- Conceived, designed, and built GlueLess end-to-end as a solo project.
- Leveraged AWS cloud infrastructure to streamline and automate data movement from legacy systems to AWS, significantly simplifying workflows for clients and data analysts.
- Empowered users with a user-friendly interface, eliminating the need for specialized Python knowledge and reducing onboarding time.
- Reduced processing costs by 42% through optimized data transfer workflows and efficient resource utilization.
- Consolidated 30+ disparate data movement scripts into a unified, maintainable solution, reducing code duplication and technical debt.
- Enhanced team productivity by abstracting complex AWS Glue operations behind user-friendly abstractions while maintaining full configurability for advanced use cases.

Bullet Hell *Shoot'em Up game refactored from procedural to object-oriented architecture | Completed*

- Redesigned game architecture applying OOP principles (inheritance, encapsulation, polymorphism) to improve code maintainability and extensibility.
- Reduced code duplication by 60% and enabled easy addition of new enemy types and power-ups without modifying core game logic.

Academic Management System *Web platform for attendance control, academic performance tracking and low engagement alerts for EACH USP's prep course students | In progress*

Skills

Programming Languages: Python (Intermediate - 2 years, production experience); Java (Intermediate); SQL (Intermediate - 1 year); C (Intermediate).
Cloud & Infrastructure: AWS (Intermediate - Glue, Athena, Step Functions, Lambda, S3, IAM); PySpark for distributed data processing. **Software Engineering**: Git version control, object-oriented design, ETL pipeline architecture, code review, technical documentation. **Tools**: VS Code, Jupyter Notebooks, AWS Console/CLI/boto3

Currently focusing on deepening cloud architecture patterns, distributed systems, and software design principles.

Education

Bachelor of Science in Computer Science | Expected Graduation: 2027 *University of São Paulo (USP) - EACH | Top 3 Latin America | 2024 – 2027*

Interests: Pottery | Piano | Hiking -- quite rare nowadays in the city | Discovering coffee shops -- quite regular nowadays | Collecting plants | Teaching