Mateus M. Furquim Mendonça

Machine Learning and Software Engineer

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Professional Summary

Highly skilled software engineer with over 10 years of experience and a diverse background. Committed to team growth and innovation through effective mentoring and collaboration. Strong problem-solving skills with a passion for delivering high-quality software solutions.

Work Experience

Machine Learning Engineer
Jul 2025 – Present

Amaris | AB InBev Remote

Developed scalable microservices using a multi-tier routing topology in RabbitMQ to decouple publish-subscribe communication.

> Implemented an in-memory Redis caching layer to meet low-latency requirements for real-time AI model inference.
> Applied the Repository Pattern abstract data access logic, allowing for parallel development across teams and improving code maintainability.
> Monitored production performance and system health using New Relic, ensuring high availability and reliability of deployed ML services.

Back-end Developer
Jan 2021 – Jul 2025

DevGrid | Voltaware Remote

Managed several microservices that employ machine learning algorithms to estimate house appliances' energy consumption.

> Achieved up to 59% improvement in **Python** write operations on **Cassandra** through the safe utilization of unlogged batches.
> Iteratively improved domain models following **Domain Driven Design** approach, increasing efficiency in delivering new features.

Embedded Software Developer
Nov 2019 – Aug 2020

Autotrac Brasilia, DF - Brazil

Maintained security and logistic features of an embedded system for a customized hardware and Linux kernel.

> Employed dependency injection and other **SOLID principles** to enhance **C++** code quality and maintainability.
> Implemented **monitoring** solutions to gather real-time performance data, ensuring optimal system efficiency and responsiveness.

DevOps Consultant
Jan 2019 – Nov 2019

IBM Brasilia, DF - Brazil

Collaborated with multiple teams to improve observability of the back-end services of a prominent banking institution.

> Contributed to self-discovering services feature using **etcd** key-value store, **consistent hashing** and a **federation of Prometheus**.
> Employed **PromQL** to develop alerts that detected low performance of new deployments and potential DDoS attacks.

Intern Experience

Security Software Researcher
Nov 2015 – Jul 2016

LADES at UnB Brasilia, DF - Brazil

Enhanced an Intrusion Detection System with unsupervised machine learning to strengthen the security measures of the Brazilian Army.

> Configured a **Debian** server to capture all network packets in promiscuous mode using **Wireshark** and replay them in a controlled environment.
> Successfully detected masked malicious network packets using **K-Means clustering** algorithm and distributed processing with **Spark** and **Hadoop**.

Software Engineer Intern
Jan 2015 – Apr 2015

CanAssist at UVic Brasilia, DF - Brazil

Developed an elderly care embedded system which notifies relatives in case of emergency.

> Devised an automated data-driven **regression testing** methodology, improving the efficiency of the testing cycle and ensuring alignment with requirements.
> Accomplished a low resource consumption of **Raspberry Pi** by rotating log using the **C/C++** language and the **Qt** Framework.

Education

Machine Learning DevOps Engineer
Udacity

 Online Nov 2021 – Dez 2022

BEng. Software Engineering
Universidade de Brasilia (UnB)

 Brasilia, DF - Brazil Mar 2011 – Jul 2017

University of Victoria (UVic)

 Victoria, BC - Canada Jan 2014 – Apr 2015

Languages

Portuguese	Mother Tongue
English	Fluent

Python	Working Knowledge
C/C++	Working Knowledge
Go	Intermediate Knowledge
Rust	Basic Knowledge

 Linux   Bash   Regex   GitFlow   CI/CD   Docker   RESTful   SQL / NoSQL