

MATEUS M. FURQUIM MENDONCA

Machine Learning and Software Engineer

@ mfurquimdev@gmail.com

[mfurquimdev](#)

[in/mfurquimdev](#)

[mfurquim.dev](#)

+55 (61) 9 8189-2456

[Brazil](#)

PROFESSIONAL SUMMARY

Data-driven software engineer with more than five years of experience focusing on back-end development. Dedicated to fostering team growth and innovation through effective mentoring and collaboration. Strong problem-solving skills and a passion for delivering high-quality software solutions.

WORK EXPERIENCE

Back-end Developer

Jan 2021 – Present

DevGrid

[United Kingdom \(Remote\)](#)

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.
- Effectively addressed daylight saving time and timezone issues by **encapsulating** it within a **dataclass**, ensuring simplified maintenance.

Embedded Software Developer

Nov 2019 – Aug 2020

Autotrac

[Brasília, DF - Brazil](#)

Maintained the 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.
- Created **ansible books** to automate the configuration of Linux environment for the development of a low-level system.

DevOps Consultant

Jan 2019 – Nov 2019

IBM

[Brasília, 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 by utilizing the **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 – Jan 2017

LADES at UnB

[Brasília, 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

[Victoria, BC - Canada](#)

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

- Accomplished a low resource consumption of **Raspberry Pi** by rotating log using the **C/C++** language and the **Qt** Framework.
- Created an entire configuration menu using the **Asterisk** framework with Text to Speech capabilities to be used via a phone call to the Raspberry Pi.

EDUCATION

Machine Learning DevOps Engineer

Udacity

Online

Nov 2021 – Dez 2022

BEng. Software Engineering

Universidade de Brasília (UnB)

[Brasília, DF - Brazil](#)

Mar 2011 – Jul 2017

University of Victoria (UVic)

[Victoria, BC - Canada](#)

Jan 2014 – Apr 2015

Exchange Student

LANGUAGES

Portuguese Mother Tongue
English Fluent

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