

# MATEUS M. FURQUIM MENDONCA

## Machine Learning and Software Engineer

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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

DevGrid

Jan 2021 – Present

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

Autotrac

Nov 2019 – Aug 2020

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

IBM

Jan 2019 – Nov 2019

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

LADES at UnB

Nov 2015 – Jul 2016

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

CanAssist at UVic

Jan 2015 – Apr 2015

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.
- Devised an automated data-driven **regression testing** methodology, improving the efficiency of the testing cycle and ensuring alignment with requirements.

## 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