

# MATEUS M. FURQUIM MENDONCA

Machine Learning and Software Engineer

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## PROFESSIONAL SUMMARY

Highly skilled software engineer with over 5 years of experience and a diverse background - encompassing firmware and back-end development, as well as DevOps consultancy. 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

### 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.
- Iteratively improved domain models following **Domain Driven Design** approach, increasing efficiency in delivering new features.

### Embedded Software Developer

Autotrac    Nov 2019 – Aug 2020    Brasília, 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 robust **monitoring** solutions to gather real-time performance data, ensuring optimal system efficiency and responsiveness.

### 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.

- 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    Nov 2021 – Dez 2022    Online

### BEng. Software Engineering

Universidade de Brasilia (UnB)    Mar 2011 – Jul 2017    Brasília, DF - Brazil

University of Victoria (UVic)    Jan 2014 – Apr 2015    Victoria, BC - Canada    Exchange Student

## LANGUAGES

Portuguese	Mother Tongue
English	Fluent
Python	Working Knowledge
C/C++	Working Knowledge
Rust	Basic Knowledge