MATEUS M. FURQUIM MENDONCA

Machine Learning Engineer & Backend Developer

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EXPERIENCE

Machine Learning Engineer   DevGrid

📅 Jan 2021 – Present   📍 United Kingdom (Remote)

Maintained several microservices that employ machine learning algorithms to estimate the energy usage of household appliances.

› Achieved up to 59% improvement in **Python** write operations on **Cassandra** through the safe utilization of unlogged batches.

› Resolved daylight saving time and timezone inconsistencies by developing a library that accurately handles arithmetic operations on datetime objects.

Embedded Software Developer   Autotrac

📅 Nov 2019 – Aug 2020   📍 Brasilia, DF - Brazil

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

› 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   📍 Brasilia, DF - Brazil

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

› Contributed to the development of self-discovering services by utilizing the **etcd** key-value store, **consistent hashing** and a **federation of Prometheus**.

› Employed **PromQL** to develop alerts that detected potential DDoS attacks and low performance of new deployments.

Security Software Researcher   LADES at UnB

📅 Nov 2015 – Jan 2017   📍 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   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.

› 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

📅 Nov 2021 – Dez 2022   📍 Online

BEng. Software Engineering

Universidade de Brasilia (UnB)

📅 Mar 2011 – Jul 2017   📍 Brasilia, 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
</> Go   Working Knowledge
</> Rust   Basic Knowledge

DISTINCTIONS

› Striving for process efficiency and automation through **bash script** and **CI/CD**

› Thoroughly **eliciting requirements** in order to design more efficient solutions

› Demonstrated competence in rapid project development by participating in Hackathons and Game Jams.

PUBLICATION

Big Points: An analysis based on game theory

UnB   github.com/mfurquimdev/tcc

📅 Jul 2017   📍 Brasilia, DF - Brazil

Discovered an imbalance in the Big Points game using the Minimax theorem and **Dynamic Programming** techniques in **C/C++**.