MÔNICA EMEDIATO MENDES DE OLIVEIRA

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EXPERIENCE

Product Development Engineer - Full time
Embraer

📅 02.2023 – Ongoing 📍 São José dos Campos, São Paulo, Brazil

- Hardware and component engineer. Debugging, testing and integrating systems.
- Developing and creating routines to calibrate, automate and do tests in actuactors. Verifying sensor data in the Flight Control System.
- Firmware development and tests for certification.
- Working in the Flight Control System team.

Research Internship - Full time
NHL Stenden University of Applied Science

📅 08.2021 – 08.2022 📍 Leeuwarden, Friesland, Netherlands

- Spark detection and prevetion device for Electrohydrodynamics Atomization Applications in real-time. Working in the High Voltage (HV) Laboratory in the Water Technology Center.
- High-speed camera, HV power supply, Wi-Fi oscilloscope, pump, cables, and a monitoring and controlling system in an Electrospray system through C++/Python development and integration. The code is still been used in the HV Lab.
- Coding for peripherals such as UART, SPI, I2C, GPIOs, USBs, logic/protocol analyzers for debugging embedded systems.
- Electric current datalogger with Raspberry Pi 4B+ and GSM using InfluxDB and Grafana for remote control of a Gas company in The Netherlands. Working alone and weekly meetings with the advisors: Klaus Glanzer, Luewton Agostinho.

System Analyst - Full time
VMI Security

📅 11.2020 – 04.2021 📍 Lagoa Santa, Minas Gerais (MG), Brazil

- C++ (embedded), QML, and Python programming in Qt Creator for an XRay company. Coding for Computer Vision improvements, calibration, and filters in the OpenCV library. Solving problems daily.
- Embedded programming. Dealing with different protocols, parallels, and asynchronous programming (MQTT, UART, SPI, etc). Git, agile, and team collaboration. Docker and Software and Architecture Development. I left this job just because I liked the opportunity in Leeuwarden.

Undergraduate Student Researcher
Laboratório de Potência TESLA - UFMG Electrical Department

📅 12.2018 – 12.2020 ... 📍 Belo Horizonte, MG, Brazil

- Project named SmartBattery in partnership with Petrobras (it is a state-owned Brazilian multinational corporation in the petroleum industry headquartered in Rio de Janeiro). Research and development based on realizing the internal network and data control of photovoltaic panels at Escola de Engenharia at UFMG with Raspberry Pi 3.

EDUCATION

Candidate of Master of Science in Control Engineering
Instituto Tecnológico de Aeronautica (ITA)

📅 08.2023 – Ongoing 📍 São José dos Campos, SP, BR

Subject: *Model Predictive Control (MPC)*

B.S. Control and Automation Engineering
Universidade Federal de Minas Gerais (UFMG)

📅 07.2017 – 02.2023 📍 Belo Horizonte, MG, BR

Thesis title: *Spark Detection And Prevention Device For Electrohydrodynamic Atomization Applications*
UFMG is one of Brazil's best universities and has been frequently rated among the ten best universities in Latin America. The engineering course is very complete, we have many laboratories and lasts at least 5 years. Belo Horizonte is the capital of the state Minas Gerais (MG), Brazil

Tech. Computer Networks, Technical High School
Centro Federal de Educação Tecnológica de Minas Gerais (CEFET-MG)

📅 02.2013 – 06.2017 📍 Belo Horizonte, MG, BR

Thesis title: *Confidentiality and Intrusion Detection Systems Analysis that are OpenSource.* The course ended in 2015, and it requires internships in order to get the diploma. The Federal Centers for Technological Education are focused on high school, technical high school and academic degrees linked to technology. Many of them offer academic degrees, just like universities.

SKILLS

C/C++ Python Matlab Simulink
R Grafana MySQL PostgreSQL

Linux Unix ESP32 Raspberry Pi
Arduino KiCAD Altium

- The main goal was to monitor a solar panel grid and see differences of electric current in the circuitry.
- PCB box to have ESP32 on it with KiCAD. In this activity, I performed many electronic and hardware development, and I welded and choose SMD components. Technologies: ESP32, ESPEasy, KiCAD, Nextcloud (create our own cloud), Emoncms (allows data to be sent via HTTP/MQTT) and NODE-RED (interconnection in a physical way between inverters and Raspberry for I/O, cloud based systems and database). Working alone and weekly meetings with the advisor: Thales C. Maia

Physics teacher - Volunteer

Rede Emancipa

📅 03.2020 – 05.2021   📍 Belo Horizonte, MG, Brazil

- Federal universities in Brazil are very good, public and highly competitive. There are preparatory courses for the entrance exam. It is usually expensive and those who do not have money can not afford it, so I decided to start teaching online on weekends throughout the pandemic period.

Information Technology Analyst - Full time

Fundação CEFETMINAS

📅 10.2019 – 03.2020   📍 Belo Horizonte, MG, Brazil

- Full Stack Development: Python and Python Flask, Javascript, HTML and PHP, Postgres database in an agile environment. Website creations. Maintenance of websites and physical servers. User support, supporting different kinds of people. SQL Server for creating and modeling relational databases. SeekTable for data cleaning, modeling, and displaying.

Graduate Student Researcher

UFMG

📅 05.2018 – 11.2018   📍 Belo Horizonte, MG, Brazil

- Working on a master's project with MATLAB in the Civil Engineering Department.
- Development of Computer Vision code to identify and classify railway sleepers. We used tools in MATLAB to filter and treat GoPro videos. Advisors: Laís Faria, Nilson Tadeu Ramos Nunes.

RELEVANT ACTIVITIES

📄 Presentations

- "Invited speaker," *5th European Symposium on Electrohydrodynamic Atomization and Electrospinning in Naples, Italy*, 2022.
- "Poster presentation," *NHL Stenden Congress, Leeuwarden, the Netherlands*, 2022.
- "Poster presentation," *Wetsus Congress, in Leeuwarden, the Netherlands*, 2021.

LANGUAGES

Portuguese
English
Spanish
Dutch
German

STRENGTHS

Hard-working   Persistent   Communicative

Flexibility & Adaptability   Clean code

Design Thinking

PROFILE

"I graduated in Control and Automation Engineering and I am currently studying Embedded Systems. My technical course was joined with my high school, so I learned programming very young and since then I have been doing internships because I think is the best way of learning something new. I like complex and important problems for society. I like to work with teams. I am proactive and I am not afraid to ask in case of doubts".

CERTIFICATION

- 2023: **IELTS, 6.5**.
- 2022: **VCA-B-SCC Certification of the knowledge of safety and healthy for industrial environment, Netherlands, 2022**.
- 2020: **Sensors and Sensor Circuit Design**, by University of Colorado Boulder and offered through Coursera.
- 2020: **DevOps Culture and Mindset Course** , by University of California, Davis and offered through Coursera.

REFEREES

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