Diego Mendes Moreno

Software Engineer - Brazilian

Sao Paulo / SP - Brazil (open to remote)
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Profile

I am an Electronics Engineer and have an MBA in Software Engineering. I have experience developing industrial and web applications. My main skills are related to software development in general, following agile and software engineering practices.

Skills

Programming - C, Python
Software Engineering - Git, GitHub, Agile Methodology, Unity/MinUnit (tests), Linux
Languages - Portuguese native speaker - Fluent English - Advanced Spanish - Intermediate French
Soft skills - Continuous learning attitude, customer facing communication

Education

Impacta Tecnologia, Sao Paulo, SP (Brazil) - 2022
MBA Software Engineering

Centro Universitário da FEI, Sao Bernardo do Campo, SP (Brazil) - 2015
Bachelor of Electronics Engineering

University of Alabama at Birmingham, Birmingham, AL (USA) - 2013
Bachelor of Electrical Engineering

- One-year Student Exchange through the Science without Borders Program sponsored by CAPES (Brazilian government)

Experience

Senior Firmware Developer January 2025 - Present
Qubika, Sao Paulo, SP (Brazil)

- Developed pre-silicon firmware for a secure embedded processor module in a high-performance SoC (System on a Chip) targeting mobile computing platforms.
- Worked on early bring-up, boot flow, and low-level driver support for security-focused embedded subsystems.
- Collaborated with cross-functional teams including hardware design, verification, and architecture teams to ensure firmware readiness for silicon tape-out.
- Utilized pre-silicon environments such as emulators and simulators to validate firmware behavior.
- Contributed to secure boot flows, key provisioning logic, and platform initialization sequences, ensuring alignment with platform security specifications.
- Applied deep knowledge of embedded C, hardware abstraction, and memory-mapped I/O in a resource-constrained OS environment.

Staff Field Applications Engineer February 2022 - January 2025
Renesas Electronics, Sao Paulo, SP (Brazil)

- Provided support for embedded software development in C/C++

- Provided support on microcontroller architecture specifics (e.g. ARM Cortex-M RA and Synergy, RX, RL78, DA14531, DA16200 and RZ) on memory protection, boot modes, low-power, option setting memory, memory layout, etc.
- Provided support on microcontroller peripheral usage such as CAN, SPI, I2C, UART, Timers, etc.
- Testing, troubleshooting, debugging and validation of software and hardware for board bring up and general working issues using bench tools (e.g. oscilloscope, logic analyser) and following circuit schematics and PCB layout drawings
- Provided support for use and configuration of integrated development environments (IDEs) and software debugging tools
- Delivered technical training sessions and product demos in customers and partners
- Part of a worldwide remote team with a hands-on customer facing role

Embedded Software Engineer — February 2021 - February 2022

J.Assy, Sao Paulo, SP (Brazil)

- Development of embedded software for precision planting (Agribusiness) products following software development best practices
- Added a CAN (Controller Area Network) API interface to our vacuum seed meter product to support a new kind of seed sensor (Technologies: C, CAN)
- Expanded the API interface of a wireless sensor gateway adding new features (Technologies: C, CAN)
- Developed a Proof of Concept (PoC) IoT project end-to-end of a wireless sensor gateway with Wi-Fi connectivity that monitors sensors through a Web App (Technologies: C, Wi-Fi, Web Server, RESTful API, Javascript, HTML, CSS)
- Developed a PC application with a GUI (Graphical User Interface) to monitor sensors in real time, shows important metrics and generates reports (Technologies: Python)
- Worked to add, refactor and integrate code into a large decentralized codebase
- Performed and was under frequent code reviews along with the development team
- Working with Agile practices and tools (Jira, Git, BitBucket, Confluence)
- Implemented a version control friendly Documentation practice with Markdown and PlantUML for product docs

Field Applications Engineer — May 2014 - February 2021

Karimex Componentes Eletrônicos, Sao Paulo, SP (Brazil)

- Development of embedded software for 8-bit, 16-bit and 32-bit microcontrollers for various applications
- C and Python development for Embedded Linux
- Embedded Linux customization using the Yocto Project
- Development of graphical user interfaces (GUI) with Qt
- Active use of Git/GitHub for version control
- Use of IoT Web services (MQTT/HTTP) like Tago.io and AWS
- Experience with Wi-Fi (IEEE 802.11), Bluetooth Low Energy (BLE) and TFT control stacks
- Technical training on embedded systems
- Technical support on embedded systems and power electronics
- Development and delivery of product and prototype demonstrations
- Technical visits in customers
- Electronic component specification and cross reference for various applications

Software Engineer Intern — October 2013 - May 2014

Itaú Unibanco S.A., Sao Paulo, SP (Brazil)

- Development of macros (VBA programming) for automation of spreadsheets

Research Intern — October 2013 - January 2015

Centro Universitário da FEI, Sao Bernardo do Campo, SP (Brazil)

- Software and hardware development of an embedded frequency inverter for UPS (uninterruptible power supply) systems

Research Intern — May 2013 - July 2013

University of Alabama at Birmingham, Birmingham, AL (USA)

- Experience using high-performance computing (HPC) to process diffusion tensor imaging (DTI) through Shell commands in a Linux/Unix based system