Tiago Medicci Serrano

Greater Campinas

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Summary

Senior Embedded Software Engineer with 10+ years of experience. Self-learning and hands-on skills combined with solid academic formation. Lead engineer in IoT-based projects of energy-saving and ambient monitoring. Responsible for thousands of deployed equipment on several clients aiming at reliability, security and value-based solutions. Currently, Embedded Software Engineer at Espressif, helping to enhance ESP32-family support for the Apache NuttX RTOS.

Experience

Embedded Software Engineer
Espressif Systems
Aug 2022 - Present (1 year 7 months)

Technical Lead
Time Energy
Oct 2019 - Jul 2022 (2 years 10 months)
Leads the hardware and embedded firmware development team to continuously supply Time Energy's customers with ambient sensors and energy monitoring solutions. Actively working on the very steps of product development: concept, project, designing, programming, testing and production, as well as field support of deployed equipment and cloud architecture. Solutions based on embedded Linux (Buildroot and OpenWrt-based distros along with MediaTek/Broadcom SoCs), ESP32 (FreeRTOS-based) and bare-metal. Responsible for securing communication interfaces, protecting clients' sensitive information and assuring device reliability.

Senior Software Engineer
Time Energy
May 2017 - Jul 2022 (5 years 3 months)
Responsible for home and energy industry R&D projects aiming for smart energy efficiency. Conceptual analysis of new products and solutions, associated electronics and mechanics, embedded programming, tests, deployment and cloud architecture.

Hardware Development Manager
Time Energy
Oct 2019 - Oct 2019 (1 month)
Leading the team of hardware and embedded firmware development to continuously supply Time Energy's customers with solutions and systems to the energy monitoring industry.

Embedded Software Manager
Star Lighting Division

Feb 2015 - Apr 2017 (2 years 3 months)
Project and development of products for the professional entertainment and architectural lighting market. Bare metal and FreeRTOS-based programming with serial-based and network-based protocols for remote-controlled equipment. Field support on deployments and training of clients' technical team.

Electrical Engineering Intern
Star Lighting Division
Apr 2014 - Feb 2015 (11 months)
Bare Metal programming of Microchips and Atmel microcontrollers for the professional entertainment and architectural lighting market.

Project Engineering Intern
Loudness Sonorização
Jan 2014 - Apr 2014 (4 months)
Professional sound system design. Writer of technical specifications and user manuals. Development of remote-controlled sound systems.

Education

Universidade Estadual de Campinas
Master's degree, Project and development of an IoT smart plug with advanced energy metering and monitoring
2018 - 2020
Research and Development of a low-cost Smart Plug that embeds advanced energy metering features. In contrast to on-the-shelf devices, measured electrical parameters are easily available locally and remotely and provide full information about attached appliances. The Smart Plug supports developers, researchers and home users to monitor attached appliances and improve the knowledge of their equipment. In addition to home automation features, the Smart Plug can save energy and costs by detecting faulty equipment, to prevent failures and warn users about unexpected behavior of the attached equipment.

Universidade Estadual de Campinas
Engineer's degree, Electrical and Electronics Engineering
2009 - 2015

Skills

C (Programming Language) • Real-Time Operating Systems (RTOS) • Hardware Engineering • Embedded Systems • Firmware • Electrical Engineering • Engineering • Electronics • Software Development • Microcontrollers