

Lincoln Wallace Veloso Almeida

Since childhood, I have been passionate about technology-related subjects. I am interested in the areas of firmware development for Embedded Operating Systems, real-time operating systems (RTOS), Embedded Linux, the Internet of Things (IoT), Game Development and the development of digital systems on FPGAs.

ACADEMIC QUALIFICATION

Universidade Federal De Itajubá (UNIFEI), Itajubá — *Bachelor's degree*

MARCH 2018 - DECEMBER 2022

Bachelor's degree in Electronic Engineering with a focus on Embedded Systems, Hardware and Firmware Development. Digital and analog systems.

SENAI Itajubá UI Aureliano Chaves, Itajubá — *Technician*

FEBRUARY 2016 - DECEMBER 2016

Industrial apprenticeship in Electrotechnology. Experience with project and execution of building electrical installations. Knowledge of digital electronics and microcontrollers. Activation of three-phase inductive motors using logic techniques with electrical commands and Ladder programming of PLCs.

FEPI College, Itajubá — *High School*

FEBRUARY 2017 - DECEMBER 2017

Completion of high school at Fepi College, a school belonging to FEPI - Foundation for Education and Research of Itajubá, University Center of Itajubá

PROJECTS

Free Pilot — *Development of a Flight Data Acquisition and Control System for UAVs*

MARCH 2020 - DECEMBER 2020

An extension project coordinated by Professor Dr. Yohan Alí Díaz Méndez that aims to instrument a UAV for a flight data acquisition embedded system project. Gaining experience in PCB design for embedded systems and instrumentation of UAVs that can successfully acquire more than 15 different types of data at a rate of 25Hz. This system will later be used in the implementation of a flight controller.

José Mendonça Chaves Street,
340

Itajubá, MG, 37502-519

+55 35 99733-6145

lincolnwallacedev@gmail.com

lincolnble@hotmail.com

Project portfolio:

[Visit my site!](#)

GitHub Repository:

[GITHUB](#)

Linkedin:

[Lincoln Wallace](#)

SKILLS

- Firmware Development

- Programming languages
Python, Rust, C and C++
including multithreading
systems (**Linux C**
multithreading and **C++**
multithreading). Build tools:
GNU Make, Cmake, and Ninja.

- Scripting languages **Bash**
and **Powershell**

- Absolute **Assembly**
programming for **ARM**
architectures

- **ARM** development with
Cortex M0, Cortex M0+,
Cortex M3, Cortex M4, and
Cortex A9 processors.

- **ST, Espressif, ATMEL,** and
PIC microcontrollers.

- Development of
applications and use of
low-level Kernel Linux
subsystem drivers for

PE05 - Solver RTK — *Development of an IoT dam monitoring system based on GNSS systems using RTK (Real-Time Kinematics) technique*

FEBRUARY 2021 - AUGUST 2021

A project based on an autonomous IoT dam monitoring system that uses GNSS systems operating in DGNSS (differential global satellite navigation system) mode based on RTK (real-time kinematics) technique. This system allows for the acquisition of different location points with an accuracy of 1 cm, and through the use of IMUs, barometers, and sensor fusion techniques, the accuracy of displacement detection is increased to 1 mm.

PE03 - Solver Piezometer — *Firmware update for an IoT water column measurement equipment in dams*

SEPTEMBER 2021 - NOVEMBER 2021

Update and maintenance of the firmware for electronic project 3 (PE03). An autonomous IoT piezometer that reads static pressure and temperature to calculate the water column in dams and sends these readings via LoRaWAN network to an online monitoring platform.

OHMVEX Ohmmeter — *Development of a Graphical Interface in QT for an Embedded Linux platform*

NOVEMBER 2021 - JUNE 2022

At High Voltage Equipment - HVEX, development of embedded software for a GUI (Graphical User Interface) using Embedded Linux based on ARM Cortex-A9 CoMs (Computer on Module). Maintenance of firmware for ARM microprocessor-based equipment using RTOS. Experience with Scrum methodology workflow.

MARTH Linux — *Desenvolvimento em Linux Embarcado*

JUNE 2022 - PRESENT

At ATIVA Technological Solutions, development of an IoT datalogger on an LTE cellular modem that runs an Embedded Linux-based operating system. Experience as a Linux Embedded application developer and system integrator. Work on Cross-compilation of Software, use of cross-toolchain, build-systems, and customization of the Kernel.

applications using Embedded Linux

- **Cross-Compilation, Autotools**

- Version control tool git and Github, use of Gitflow Workflow.

LANGUAGES

Native Portuguese - reads well, speaks well, writes well, and understands the language well.

Advanced English - reads well, speaks well, writes reasonably well, and understands the language well.

Intermediate French - passed the DELF language proficiency exam level B1 with 73 points and level B2 with 63 points. Reads well, speaks reasonably well, writes reasonably well, and understands the language well.

Basic Spanish - reads reasonably well, speaks little, writes little, and understands the language reasonably well.

Beginner German - reads little, speaks little, writes little, and understands little of the language.