
Thiago de Oliveira Cavalcante

Back-end Developer

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SKILLS

Java, Kotlin, Spring Framework, Agile, Bash, C, Ruby, Ruby on Rails, JavaScript, HTML, Linux, Git, REST, LaTeX, RegEx

EXPERIENCE

Back-end Developer (Back-end for Front-end) @ Itaú - [Zup](#), Remote

JULY 2022 - PRESENT

- Built Java/Kotlin-based BFFs with Spring Boot for mobile banking applications, integrated into projects for credit card services (enrollment, payments, statements, among others).
- Mentored colleagues in BFF development, covering architecture and software development.

Back-end Developer (Bootcamp) - [Zup](#), Remote

MARCH 2022 - AUGUST 2022

- Participated in the "Senior Academic Acceleration" bootcamp, designed for professionals with solid academic experience (post-graduate level) in the field of Computer Science, with courses and activities covering both soft skills and hard skills topics, and with an approach that combines theory and practice.
- Hard skills topics: CRUD with Java, Spring, and JPA/Hibernate; concurrent updates with JPA/Hibernate; security with Spring Security and OAuth2; integration tests with Spring; migrations with FlywayDB; hexagonal architecture; monitoring and tracing.
- Soft skills topics: agile methodology; feedback; communication in the workplace; learning skills.

Back-end Developer (Ruby on Rails) - [SysPat](#), Remote

AUGUST 2019 - FEBRUARY 2022

- Added support for new document types in a writing system previously exclusive to Patents, allowing users to create papers and reports and convert between each type.
- Expanded the document writing system with: support for inline mathematical expressions, document download status, and configurable templates for report generation.
- Replaced HTML templates with LaTeX templates to create organizational reports and redesigned the organizational statistics pages.
- Redesigned the application's license system to include internationalization of license prices, according to the user's geolocation. Added price change page for administrators.
- Integrated the application with the EPO (European Patent Office) API, for registration and legal information.
- Implemented asynchronous display of elements to improve page loading times.
- Advocated for the adoption of good development practices, including the use of tools such as formatters, linters and language servers.

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- Wrote the project's documentation, with installation instructions, application deployment procedures, server configuration, debugging and troubleshooting procedures. Also added code snippets and useful commands.
 - Work routine with agile practices such as weekly planning meetings and task management with a Kanban board

Lecturer (Algorithms and Programming) - *Federal University of Alagoas, Penedo/AL*

OCTOBER 2019 - JANUARY 2021

- Subjects covered in the courses: C programming and data structures, web development with Ruby on Rails and Git fundamentals, analysis of algorithms, introduction to object-oriented programming with Python, mobile development with Dart and Flutter.
- During the pandemic, the lessons were recorded and made available on YouTube.

Researcher (Electronic Eng.) - *Networking and Telecommunications Research Group, Recife/PE*

MARCH 2014 - JULY 2018

- Implemented a GUI in Python for real-time display of information obtained from an electronic energy meter. Data decoding was done by inspecting of the official source code of the equipment, written in C.
- Implemented a Python program to collect energy measurements sent by smart plugs using the MQTT protocol, with log and time series charts generation.
- Implemented a people detection and counting software for Arduino using two infrared sensors, with the possibility of wireless data transmission.
- Designed and prototyped several printed circuit boards, including: boards to facilitate testing and integration between electronic chips, communication modules and embedded system platforms (e.g. Arduino, ESP family), connection boards for Smart Cards and boards for detection of pulses generated by water meters using inductive sensors.
- Designed and prototyped an IoT device using an ESP8266 microchip integrated with a Smart Card, with firmware that allows the exchange of messages between the components.
- Expanded an open source application for Smart Cards, using the Java Card API, with new cryptographic functions e key storage according to the PKCS standards.
- Designed and implemented a secure TLS-based messaging protocol for the IoT device to communicate with computers.
- Created a universal remote control for air conditioning devices using Arduino.

EDUCATION

Master of Science in Computer Science - *Federal University of Pernambuco, Recife/PE*

MARCH 2015 - SEPTEMBER 2017

Thesis: **"Secure Communication System for Internet of Things Devices Using Smart Cards"**

Bachelor of Science in Electronic Engineering - *Federal University of Pernambuco, Recife/PE*

AUGUST 2008 - NOVEMBER 2013

Thesis: **"Maximum Power Point Tracking Techniques for Photovoltaic Systems"**

CERTIFICATIONS

[Udemy — Spring Framework 5: Beginner to Guru](#)

JUNE 2021

[HackerRank — Java \(Basic\)](#)

MARCH 2021

[HackerRank — Python \(Basic\)](#)

SEPTEMBER 2020

LANGUAGES

Portuguese: native

English: intermediate speaking/writing, advanced listening/reading