

# BERNARDO CARVALHO

Software Developer

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## Objective

Enter the job market as quickly as possible, with the aim of gaining professional experience, deepening my knowledge in the area and building a network of contacts.

## Summary

Graduated in *Economics* and currently a freshman in *System Analysis and Development*, my contact, and consequent familiarity, with technology dates back to 2005, the year I got my first computer. On the subject of computer science, until then, my knowledge took place online through self-teaching and by taking courses, with *CS50P* and *CS50x* as highlights, courses offered free of charge by *Harvard University* through the *CS50 program*. Member of *Senatec* as a full-stack Developer since May 2024, I also study information security at *TryHackMe*.

## Experience

**Senatec — Centro Universitário Senac RS (UniSenac)'s junior company, Pelotas, RS**

Full-stack Developer | 2024 – present

## Education

**Centro Universitário Senac RS (UniSenac), Pelotas, RS, Brazil**

Bachelor of Technology - BTech in System Analysis and Development | 2024 – present

**Universidade Federal de Pelotas (UFPel), Pelotas, RS, Brazil**

Bachelor's degree in Economics | 2017 – 2021

**Colégio Gonzaga, Pelotas, RS, Brazil**

High school diploma | 2014 - 2016

## Languages

- English (advanced).
- Portuguese (native).
- Spanish (intermediate).

## Featured projects

**Senatec's system — application to manage Senatec**

<https://github.com/senatecPelotas/SistemaSenatec/> (restricted access)

Development of the web application for project and employee management. Managed via Trello using the Kanban methodology, it works with technologies such as Express.js, OAuth2, JWT, CORS, MySQL, Sequelize on the back-end and Next.js, React, Tailwind CSS on the front-end. I work mainly as a back-end developer, assisting the front-end crew if necessary.

**NLW Unite Node — Participant management for in-person events API**

<https://github.com/bgbaine/nlw-unite-node>

A participant management for in-person events API built in Rocketseat's NLW-Unite event. Uses concepts such as coding best practices, frameworks (*Fastify*), object-oriented programming, programming logic, regular expressions, JavaScript and TypeScript.

## **Hard skills**

### **Programming languages**

- Comfortable with *C/C++*, *Java*, *JavaScript/TypeScript*, *Python*, *SQL*.

### **Web development**

- Comfortable with *HTML*, *CSS*, *Markdown*.
- Experience with frameworks like *Bootstrap*, *Express.js*, *Fastify*, *Flask*, *React*, *Tailwind CSS*.
- Experience with *ORMs* like *Prisma*, *Sequelize*.
- Experience with *MySQL*, *SQLite* databases.
- Experience with applications like *DBeaver*, *Node.js*, *Postman*.
- Experience with technologies like *OAuth2*, *JSON Web Token (JWT)*, *Cross-origin Resource Sharing (CORS)*.

### **Version control**

- Comfortable with *Git*, *GitHub*.

### **Operating systems and virtualization**

- Comfortable with *Linux* distributions, *Windows*.
- Experience with *Docker*, *VirtualBox*, *VMWare*.

### **Softwares and tools**

- Comfortable with *Bash*, *DOS*, *Zsh* shells.
- Experience with code editors like *IntelliJ IDEA*, *Nano*, *Vim*, *Microsoft Visual Studio*, *VSCode*.
- Experience with project management tools like *Trello*.
- Experience with information security tools like *Burpsuite*, *enum4linux*, *Netcat*, *Nmap*, *Metasploit*, *Wireshark*.
- Experience with office applications like *Google Docs*, *Google Sheets*, *Google Slides*, *Microsoft Excel*, *Microsoft PowerPoint*, *Microsoft Word*.
- Experience with multimedia tools like *Adobe Photoshop*, *Figma*, *Vegas Pro*.

## **Courses**

- CS50x - *CS50's Introduction to Computer Science* (2023).
- CS50P - *CS50's Introduction to Programming with Python* (2023).
- Santander's Bootcamp – *Back-end development with Java* (2024).
- Santander Coders – *Data Science with Python* (2024).
- TryHackMe – *Complete Beginner learning path* (2024).

## **Soft skills**

- Communicative
- Fast learner
- Organized
- Proactive

## **Understanding of concepts**

- Agile methodologies (*Kanban*, *Scrum*).
- Clean Code (*DRY*, *KISS*, *YAGNI*).
- Coding best practices.

- Cryptography (symmetric and asymmetric).
- Cybersecurity.
- Data structures (queues, stacks, linked-lists, trees, binary trees, hash tables and tries).
- Debugging.
- Frameworks.
- Hashing.
- Memory management (pointers, dynamic memory allocation, stack, heap and buffer overflow).
- Model-View-Controller (MVC) pattern.
- Networks.
- Object-oriented programming (OOP).
- Procedural-oriented programming (POO).
- Programming logic.
- Protocols.
- Regular expressions.
- *RESTful APIs*.
- Search algorithms (linear search and binary search).
- Sort algorithms (bubble sort, selection sort and merge sort).
- Unit testing.

## **Other projects**

### **CS50P's Final Project — Handball game in Python**

<https://github.com/bgbaine/handball>

Handball clone, a game inspired by the famous *Atari's Pong*, and made for the *Coleco Telstar* (1976). Written in *Python*, makes use of the *Pygame* library. Uses concepts such as *classes*, *object-oriented programming (OOP)*, *unit tests (pytest)*, *type system (Mypy)*, *docstrings* formulation and formatting and *Markdown* language to elaborate a README file.

### **Landing pages — Figma**

*Restaurant and travel app*

*Edécis Gourmet's*, a mock restaurant, and *NeWorld's*, a mock travel app, landing pages. Both have a sitemap and style guide (color palette and typography).

### **Codewars — Solved Katas**

<https://github.com/bgbaine/codewars>

My solutions for multiple *Codewars' kata* (a.k.a. programming challenges) using multiple languages. Uses concepts such as *algorithms*, *coding best practices*, *programming logic*, *C*, *JavaScript* and *Python*.

### **System Analysis and Development repository**

<https://github.com/bgbaine/ads>

Contents, exercises and applications for every course taken by me in System Analysis and Development. Uses concepts such as *organization*, *code versioning with Git and GitHub integration*.