João Ribeiro

<Code Cadet> @ <Academia de Código>

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A hard shell on a soft nut. I've spent the last decade designing bridges throughout the world. My structural engineering background gave the foundations about logic, constraints, and structure that allow me to write efficient and functional code. Now, unbound by the limits of physics, I want my creativity and skills to take the wheel. And above all else, I'm ready for my next challenge as a software developer.

Skills

Java

SQL

Hibernate

Maven

Spring

HTML

CSS

JavaScript

Helpfulness

Approachability

Resiliency

Languages

English Full professional

Portuguese Native or bilingual

Spanish Professional working

Experience

Structural Engineer SENER

Jun 2008 – Apr 2019

As a Structural Bridge Engineer I worked in a variety of project types, sizes and complexities.
My responsibilities included:
Preparation of structural models and calculations.

Education

<Code Cadet_>

<Academia de Código_> 2019 – 2019

A 14-Week Intensive && Immersive FullStack Programming Bootcamp

// Programming in Java
Introduction to Computer Science and Programming
Version Control Systems
Java Programming Language
Object-Oriented Programming

// Advanced Concepts and Tools
Documentation and Code Conventions
Network Programming
Concurrent Programming
Software Engineering
Build Systems
Testing
Debugging

// Databases, Frameworks and Web Development
Relational Database Management Systems
Java Database Connectivity
Java Persistence
Spring Framework
Java Web Programming

// JavaScript
JS Fundamentals
Frontend Web Development
jQuery Library

M. Sc. **Civil Engineering**

Instituto Superior Técnico 2002 – 2007

Programming, Advanced Mathematics, Numerical Analysis, Linear Algebra, Structural Analysis, Mechanics

Master: Seismic Vulnerability of the Telecommunications Network.
https://fenix.tecnico.ulisboa.pt/cursos/mec/dissertacao/2353642172226

Projects

Java Bank

Jul 2019 – Aug 2019

// The Idea

Starting from our knowledge of the Java programming language, having a simple stand-alone program, the challenge was to create a full web enterprise application, using different methodologies, architectures and frameworks.

Preparation of bridge-related structural scheme designs at feasibility, tender and detailed design stages.
Providing mentoring to graduate engineers and technicians.
Preparation of drawings and detailed sketches of engineering solutions.
Interfacing with other engineering disciplines.
Responsible for resolving technical and construction-related issues.
Managed a challenging workload subject to change.

// The Development
The application started very simple and was grown through various steps that showed us not only what problems they solved, the decisions involved, but also how they integrated in the final product. The first major step was to implement the Model-View-Controller Architecture, separating the UI from the business logic and data, using an intermediary layer.
Next we extracted business logic from the raw data by creating a Service layer, allowing us to more easily scale our application. Here we also transformed our project into a Maven project to more easily manage and scale our application.
The next logical step was to add persistence to our data with the introduction of relational databases. Because of the architecture that was implemented we were able to easily make our application agnostic to any specific RDBMS. During this step we were introduced to JPA and Hibernate.
The final step came with the introduction of the Spring framework and its modules, transforming our application into an API to be used as a back-end of our web application developed with HTML+CSS+JavaScript.

// Tech && Methodologies
Java, IntelliJ, Mac OS, Maven, JUnit, Mockito, Hibernate, Spring, Spring MVC, Spring REST, Spring Transaction, Tomcat, JPA, git, SQL, RDBMS

The Cave **https://github.com/jppribeiro/batman-cave**
Jun 2019
// Brainstorm
Our idea was to create a simple 2-player game set in a distant planet. The players had to find a way through a maze in order to find a special crystal that gave them powers. Once the crystal was caught the maze ghosts would appear looking for the intruder.

// Development
Once the idea matured and each member contributed their ideas, the base requirements where defined. Together we came up with a preliminary UML Class diagram that gave us a global vision of the structure of our project.
From there the division of tasks between team members was relatively straightforward. We used the Simple GFX library developed at <Academia de Código_> to support our graphic interface. The project was developed in Java 10.
There are many bugs that we are aware of (mainly regarding concurrency problems and the Simple Graphics library), but we learned a lot. Not only to build a project from the ground up, but also to work in a team and listen to everyone's opinions.
We used GIMP to prepare all the necessary images and also Keynote to prepare our presentation.

// My Role
I was in charge of developing the depth-first search algorithm that generated the maze. The maze is randomly generated for each new game.
I also developed the implementation for the fog-of-war that surrounds the two players. Each player only sees up to a certain distance making the game more challenging.
For the presentation we created a small theater play where I was the narrator and my colleagues enacted all the action. I was responsible for designing the slides.

// Technologies && Methodologies
Java, IntelliJ, Mac OS, git, GIMP, Keynote

Chat Server **https://github.com/jppribeiro/chat-server**
Jun 2019

// The Idea
To create a concurrent chat server supporting multiple clients.

// The Development
Using Java I developed the Server and Client applications in small steps, adding features one at a time. The program runs on the console and each client is asked to enter its name. It also supports commands like:
'/list' - show the list of user currently logged.
'/whisper' - send a message to a specific client.
'/quit' - self-explanatory

// Tech && Methodologies
Java, IntelliJ, TCP, Socket, Concurrency, Mac OS, git

Map Editor **https://github.com/jppribeiro/map-editor**
Jun 2019
// The Idea
Using the Simple Graphics library developed at <Academia de Código_> the challenge was to create a simple pixel editor that could save and load files.

// The Development
The program works based on a grid implemented with a bi-dimensional array. Each position on the array is capable of storing a certain state: painted, color, hovered, etc. It works with the keyboard. The save file registers each active cell state. The load files allows to recover a certain saved grid state.

// Tech && Methodologies
Java, IntelliJ, Mac OS, Simple GFX, git

Web Server **https://github.com/jppribeiro/web-server**
Jun 2019
// The Idea
To create a simple Web Server that supported one client only.

// The Development
Using Java I developed a Web Server that served .html and image files to one client.

// Tech && Methodologies
Java, IntelliJ, Mac OS, git