João de Jesus Costa

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GitLab: https://gitlab.com/JoaoCostaIFG

Gender: Male   **Date of birth:** 14 Sep 2000   **Nationality:** Portuguese

ABOUT ME

I am currently enrolled in a Master's degree in Informatics and Computing Engineering at FEUP. My interests mainly reside in developing software, system administration, writing, and electronics. Furthermore, I've conducted workshops in different topics (relating to informatics) while being part of the IEEE's University of Porto student branch.

LANGUAGE SKILLS

Mother tongue(s): Portuguese

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1

EDUCATION AND TRAINING

[Sep 2018 – Jun 2021] **Bachelor degree in Informatics and Computing Engineering**

Faculty of Engineering of the University of Porto (FEUP)   https://fe.up.pt

Address: Rua Dr. Roberto Frias, 4200-465, Porto, Portugal
Final grade: 18/20

[Sep 2021 – Current] **Master degree in Informatics and Computing Engineering**

Faculty of Engineering of the University of Porto (FEUP)   https://fe.up.pt

Address: Rua Dr. Roberto Frias, 4200-465, Porto, Portugal

WORK EXPERIENCE

[Jun 2021 – Sep 2021] **Computer games developer**

LusoInfo

City: Maia
Country: Portugal
Main activities and responsibilities:
This was the second time I worked for this company. I had the same responsibilities as I had the year before and worked again with a team towards the same objectives.

[Jul 2020 – Oct 2020] **Computer games developer**

LusoInfo

City: Maia
Country: Portugal
Main activities and responsibilities:
I was part of a team responsible to recreate educational games, previously developed in flash, in the Unity game engine. These games were then hosted in the companies website to be played by children aged 6 to 14 at school.
I had to code in C# and work with Unity game engine to recreate the game's mechanics visually and optimize the build to be run on lower-end computers' browsers.
Furthermore, I also had the opportunity to work with sound to develop a lip-syncing package for the in-game speaking characters.

PROJECTS

[Jun 2021 – Jun 2021] **AllRGB**

Convert an input PNG image file to an output PNG image file where every pixel is a different color from all the others. It works with images of any aspect ratio, but care needs to be taken to not use images with more than 16777216 pixels (number of RGB colors).

The main interest of this program is to input images with 16777216 pixels (e.g.: 4096x4096px) so we get an output with the different RGB colors. The idea came from allRGB.com.

https://github.com/JoaoCostaIFG/allRGB

[Oct 2020 – Jul 2021] **MAWW**

This program allows users using X11 on Linux to have animated backgrounds, regardless of their compositor. This project is available as an Arch Linux package on the AUR.

https://github.com/JoaoCostaIFG/MAWW

[Feb 2021 – Jun 2021] **Segmentation Fault**

An online QA web application resembling StackOverflow. This project was developed for the learning experience of using Bootstrap, Docker, Laravel, and PostgreSQL.

I worked in a team and was responsible for the Docker image, part of the SQL (mainly indexes and database design), most of the front-end, and accessibility/design choices.

https://github.com/JoaoCostaIFG/LBAW/wiki

[Feb 2021 – Jun 2021] **Dry Beans Classification**

In this project, we developed a model (unsupervised learning) to classify beans between seven classes with similar features. This served as an opportunity to gain experience in data science and machine learning libraries for python.

I was responsible for part of the data analysis and treatment, the application of unsupervised learning algorithms, and the comparison of the results.

https://github.com/JoaoCostaIFG/IART/tree/master/Proj2

[Feb 2021 – Jun 2021]   **Jmm compiler**

A compiler written in Java and JavaCC. It compiles Java-- (Jmm for short), a subset of the Java programming language, to Bytecode (by first compiling to Jasmin). The compiler does syntactic and semantic analysis, and optimizes the generated code.

I was responsible for writing part of the parser and semantic analysis stage, developing part of the LLIR stage, developing the Jasmin code generation, and implementing the tests.

https://github.com/JoaoCostaIFG/COMP/tree/master/Proj

[Sep 2020 – Feb 2021]   **Emulsion**

In this project, we developed a version of the Emulsion board game. The front-end was developed in plain JavaScript, using WebGL and Shaders. The back-end was developed in SICStus Prolog. The two ends communicate using a server written in Prolog.

I was responsible for the back-end, the communication server, and part of the front-end (including shaders and gameplay).

https://github.com/JoaoCostaIFG/LAIG/tree/master/TP3