

# **Clara Martins**

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### **ABOUT ME**

I'm a dedicated and committed professional. A fast learner with great attention to detail, I aim for excellence. Eager to learn more every day, explore new topics, and expand my knowledge and expertise, I hope to evolve and be closer to my best self every single day.

Throughout my academic years, I was able to explore a large variety of topics, giving me a strong foundation in which to build upon. Right now, I'm missing the joy of being challenged and learning new things. So, I'm looking for a new challenge, a new environment, where I can continue to grow, and I can share, cooperate, and learn with and from others.

### **EXPERIENCE**

Software Engineer

Critical Software

Porto, PT | Nov 2023-Present

- Validation activities for a File Transfer Protocol (CFDP)
  - Update and Discuss the Test Plan (Validation Tests)
  - Execution of the Test Plan in C++
  - Contribute to Discussions regarding the testability of the design
  - Review Requirements Document
  - Responsible for Requirement Coverage and Verification of fulfillment
- Reworked Existing Jenkins Pipeline
- Use Sphinx and reStructuredText to transform a Word document making it git friendly
- Responsible for on-boarding a new member of the team (to different project than mine)
- Design and Validation Plan for an OneSat's component (HSL), using UML and text descriptions

### Research Initiation Scholarship

Porto, PT | Jan 2023-Jun 2023

Artificial Intelligence and Computer Science Laboratory (LIACC), FEUP

- Part of the Project: DynamiCITY: Fostering Dynamic Adaptation of Smart Cities to Cope with Crises and Disruptions, with reference NORTE-01-0145-FEDER-000073
- Participating in team meetings, cooperating, and exchanging knowledge with colleagues.

## **EDUCATION**

Master in Informatics and Computing Engineering

Faculty of Engineering of University of Porto

Average Grade: 18.71/20 | Dissertation Grade: 19/20

Bachelor in Informatics and Computing Engineering

Faculty of Engineering of University of Porto

Average Grade: 18.18/20

Porto, PT | Sep 2021-Jul 2023

Porto, PT | Sep 2018-Jul 2021

### **PROJECTS**

### LAST-MILE DELIVERY PROBLEM REPRESENTATION IN RL C

Pvthon, C++ | Jul 2023

- Project for my Master's Dissertation, FEUP
- Application of Graph Deep Reinforcement Learning and Transfer Learning techniques
- Analysis on how different state representations and reward functions impact the Reinforcement Learning agents

#### INTERACTIVE SATELLITE MEGACONSTELLATION SIMULATION Rust, Python, GDScript | Jan 2023

Simulator for satellite megaconstellations, including failures and inter-satellite link strategies

#### OXID-8: A CHIP-8 / S-CHIP EMULATOR < ✓ The state of th

Rust, RetroArch, Emulator | Jan 2023

Emulator for CHIP-8 and S-CHIP Developed using the Rust Programming Language and the RetroArch framework

#### DSL FOR TABLE INTERACTION [7]

Java, Domain Specific Language | Jan 2023

• Domain Specific Language (DSL) to Create, Merge, Modify and Save Data in Table Format Megaconstellation simulator Megaconstellation simulator

#### FOREST-FIRE BASIC SIMULATION C

Python, Mesa | Jun 2022

Simple Simulation based on different forest-fire models, including the Drossel & Schwabl one

### SOLVING THE LARGE-SCALE CAPACITATED VEHICLE ROUTING PROBLEM 🗗

C++ | Jun 2022

Solving Large-Scale Capacitated Vehicle Routing Problem instances using heuristic and metaheuristic methods

#### TAK REMAKE 2

Python, Artificial Intelligence, Minimax | Jun 2021

• 1v1 game inspired in "Tak" (includes PvP, PvC and CvC modes with 3 computer difficulties)

### TALPA REMAKE [7]

Prolog, Javascript, WebGL, Artificial Intelligence | Jan 2021

• 1v1 game inspired in the "Talpa" boardgame (includes PvP, PvC and CvC modes)

#### OUT OF THE BREACH [7]

Java, Junit, Software Design Patterns, Testing Strategies | Jun 2020

• 2D singleplayer game inspired in "Into the Breach"

#### GALACTIC WARFARE ☑

C, Minix, I/O Devices | Jan 2020

• Galactic top-down shooter inspired in the game 'Spacewar!' with support for multiplayer via serial port connection

### **EXTRA CURRICULAR**

### DynamiCITY Final Workshop

Oral Presentation and Attendant

Talk a Bit Jan 2023 & Jan 2024

Attendant

### **SKILLS**

**Languages:** Portuguese (native), English (C1)

Programming Languages: C++, C, Python, Rust, Java, Prolog, GDScript, C#

Web Development: React, Bootstrap, ThreeJS, Laravel, WebGL, JavaScript, HTML/CSS, PHP

Databases: PostgreSQL, SQLite, Solr, MySQL

Software: Docker, Jenkins, Markdown, LaTeX, reStructuredText, Sphinx, Github Actions

Version Control: Git (submodules, etc), SVN

Programming Paradigms: Object-Oriented Programming, Constraint Programming, Logic Programming

Software Development Life Cycles: Waterfall, Agile (Scrum, Minimum Viable Product - MVP)

**Operating Systems:** Linux, Windows Others UML, Excel, Photoshop

Jun 2023