

# Pedro Castro

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## PROFILE

Informatics and Computing B.E. student with a strong interest in problem-solving and algorithm design. Passionate about learning new technologies and contributing to projects, aiming to develop efficient and practical solutions.

## EDUCATION

**Faculty of Engineering of the University of Porto** Porto, Portugal  
*Bachelor in Informatics and Computing Engineering* September 2022 – Present

## EXPERIENCE

**Recruit** October 2024 – Present  
*NIAEFEUP* Porto, Portugal

- Developing a mobile app in Flutter made for students to help them organize their academic life and schedule more easily.
- Developer of the College Student's Association website using Svelte, Tailwind CSS, Kotlin and Spring Boot.

## PROJECTS

**Pacman** | *Java, SOLID Principles* December 2024

- Developed a text-based adaptation of the classic Pac-Man game using Java.
- Designed the project following SOLID principles for maintainability and scalability.

**Water Supply Management Analysis Tool** | *Max-Flow Graph Algorithms* April 2024

- Developed a tool to assist the Management Team of a water supply network in Portugal.
- Implemented Max-Flow Graph Algorithms to analyze network metrics and evaluate resilience.
- Provided insights for resource allocation and identified potential improvements.

**L.EIC Schedules Management System** | *Schedule Management, Sorting, Searching* November 2023

- Created a system for managing a course schedule efficiently.
- Implemented tools for modifying, searching, viewing, sorting, and listing schedules.

**Image Editing Program** | *C++, CLI, Image Processing* May 2023

- Developed a simple C++ CLI tool for image manipulation operations.
- Implemented features such as cropping, mirroring, inverting, and pasting images.

## TECHNICAL SKILLS

**Programming Languages:** C, C++, RISC-V Assembly, Java, Python, SQL, HTML, CSS, JavaScript, TypeScript, Dart

**Software Development:** Object-Oriented Programming, Design Patterns, Refactoring, Unit Testing, Debugging, Git

**Algorithms and Data Structures:** Algorithm Analysis, Algorithm Design, Graph Algorithms

**Databases and Data Analysis:** SQLite, MySQL, Pandas, Relational Algebra, Database Design