

# Curriculum Vitae

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## Personal Information

**Name:** David Ricardo

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**Nationality:** Portuguese

**Portfolio:** <https://davidcricardo.github.io/>

## Profile

- Committed and motivated to work and to learn
- Good teamwork skills

## Academic History

**Scientific Research Fellow on project ALG/39578/2018 – NILMforIHEM (Non-Invasive Load Monitoring applied to Intelligent Home Energy Management) | Jan, 2022 – On going**

### **Master's Degree in informatics engineering | UAlg | 2019-2021**

- Developed and implemented an Artificial Intelligence Social Architecture in the video game Mount&BladeII: Bannerlord to increase NPC Believability and User Experience.
  - Main technologies:
    - .Net version 4.7.2;
    - Using C# decompilers to get access to the original source code;
    - Extending behaviors with custom classes and algorithms;
    - Json for a more data driven approach; enables easier data modifications.
- Security Camera – Leveraging the mobile's camera to record and check if there is something or someone, increasing the security for that place. If there is any significant change, the program will send messages that there is something wrong.
  - Main technologies:
    - Developed using MATLAB;
    - Algorithm has as parameters the difference between images for motion detection;

### **First Degree in Computer Science | ISTEC | 2016-2019**

- Most Relevant Project: Two Factor Authentication

This Project was the final project done and presented in the last year of bachelor's degree. Had as topic the activation of Authentication Two Factor. To enable the Authentication Two Factor, it is required to create an account on the website, to install the app on the smartphone, and to proceed with the confirmation to activate the 2FA. Then, for the user login into the website's account, it is necessary to enter the password account and to activate the 2FA on the smartphone.

Techs used:

  - C#, using Xamarin, to develop the mobile App;
  - PHP to make the connection between the App and the server/website; Also used when making the website to register and enable the 2FA.
- Learned core concepts in development, focused on C#, C++, PHP.
- Learned core concepts of working with databases: SQL, MySQL.

## Software

- Unreal Engine
- Sourcetree
- Unity
- Sculptris

## Foreign Languages:

- English

## Other Projects

- Ping Pong - Game developed using WPF on Visual Studio for academic purposes (2017).
- Breakout - Game developed using WPF on Visual Studio for academic purposes (2017).
- RPG 2D Demo web prototype - Developed using HTML, CSS, and JS for testing purposes (2017).
- Escape Lab - Game developed on Unity (C#) to explore and study the game engine. Art sourced from Unity Store; the code was fully developed by me. Objective: find the exit from the lab without the enemy get close (2017).  
Link: <https://david-ricardo.itch.io/escapelab>
- Tales Of Shadows - Game developed on Unreal Engine (C++ and Blueprint) to explore and study the game engine. Art sourced from Marketplace; the code was fully developed by me. Objective: explore some maps and to confront a few obstacles (2019).  
Link: <https://david-ricardo.itch.io/tales-of-shadows>
- Basic Game Launcher - Developed using WPF on Visual Studio for testing purposes (2019).
- Asteroids Clone - Game developed on Unreal Engine (essentially C++) in 7 days. Art sourced from Marketplace; the code was fully developed by me. Objective: survive as long as possible and to destroy asteroids to get points (2020).  
Link: <https://david-ricardo.itch.io/asteroids-clone>
- Kan Samurai – Developed using Unreal Engine and Paragon/Infinity Blade assets. It is an adventure game to explore some maps and defeat a few boss.
- Link: <https://david-ricardo.itch.io/kansamurai>