# David Parra

## Gameplay / AI Programmer

davidparraausina@gmail.com

davidonete.github.io

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## Summary

I'm a motivated and passionate video game programmer mainly interested in gameplay and AI elements. I love programming games as much as playing them, that is why I am looking forward to being part of a great game development project to enhance my skills, get experience and be able to contribute to the video game industry. I have experience with multiple programming and scripting languages, APIs, game engines and version control software.

## Skills

**Technical** Programming Languages

C, C++, C#, Objective-C, Python, PHP, JavaScript, jQuery, SQL

**Game Engines & APIs** 

Unity 3D, Unreal Engine 4, SFML, Box2D

**Others** 

AI, Gameplay, OOP, Networking, Multithreading, DB management, Web Development, Scripting, Version control software.

Languages

English (Professional working proficiency - C1)

Spanish (Native proficiency)

# Work experience

2016 - 2017

**Gameplay / AI Programmer** 

8 months

Nuclei 3D

Worked on a 3D platformer game in Unreal Engine 4. In charge of developing some level mechanics such as jump pads, draggable objects, traps and checkpoints. Designed and implemented some AI characters from scratch. Continuously in contact with artists and designers during the development to discuss new gameplay mechanics and enhances.

## Education

#### **2016 - Present**

### **BSc (Hons) Computer Games Programming**

Teesside University - Middlesbrough, United Kingdom

Predicted First-Class Honours (70%+)

**Modules:** Advanced Games Development, Artificial Intelligence for Games, Computing Project, Mobile Games Programming, Multiplayer and Social Games,

Computing Project.

#### 2013 - 2016

### **HND** in Video Game Programming

Escuela Superior de Arte y Tecnología - Valencia, Spain

Second-Class Honours (65%)

**Modules:** Programming Methodology and Algorithmic, Computer architecture, Computational Geometry for Video Games, Advanced Programming, Networking for Video Games, Physics for Gaming, Low-Level Programming, Graphic Engines Programming, Artificial Intelligence, High Level Programming.

# Projects

### AI vs Dungeon

(Jan 2017 to May 2017)

### Final year project

What if you could train your own agents to perform intelligent actions in your game? What if your agents could learn from mistakes and improve on their own? I developed a game simulator for my final year project in Unreal Engine 4, where an AI agent has to solve a 2D platformer level by using his own senses and self-learning by experience. The agent is managed by a neural network, which tells the agent what actions to perform depending on the surrounding environment and the nearest threats.

### **Passmen City**

(Jan 2017 to May 2017)

A Unity3D simulator where you can see the interaction between various types of agents, such as pedestrians or cars, in a procedurally generated city. The main idea of the project was to apply various AI techniques that are very common in modern games, such as pathfinding algorithms to move the agents around the map or finite state machines to program a basic agent behaviour. In this project, I worked on a flocking system to simulate a pedestrian crowd and also with a machine learning algorithm using neural networks to make the pedestrians learn how to cross the street properly without dying.

### Westernland: Dust to dust

(Oct 2015 to Jul 2016)

A third person shooter game made by students of ESAT in his last year of the career. The game demo was developed by a team of 5 programmers and 4 artists using Unreal Engine 4. In the project, I was in charge of managing the programming department, checking and distributing tasks as the program leader. I was also in charge of developing the main AI behaviour of the enemies and the level bosses, also integrating animations and developing the state machines of each enemy character and testing and doing a general polishing at the final phase of the project.

**References:** Available on request