CLARA PEÑALVA CARBONELL

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Professional Summary

Excellent academic record, with some experience in research and development projects. Knowledge of mathematics and physics, along with a creative basis, applied in different projects of animation and simulation. With desire to learn and improve.

Skills

- Ability to work under pressure
- Adaptability
- Creativity
- Fast learner
- Persistent
- Teamwork

- OS: Windows, Linux (Ubuntu, Fedora)

- Computer Languages: C++, C#, Python, Java, OpenGl/GLSL, SQL, HTML5, CSS3, JavaScript

- Software: Blender, Microsoft Visual Studio, Unity, MatLab, SQL Developer, Gimp, Adobe Premiere

Education

Bachelor of Science: Degree in Multimedia Engineering   [GPA 9.05 / 10]   09/2013 – 09/2017
School of Engineering (ETSE) - **University of Valencia** - Av. de l'Universitat, s/n, 46100 Burjassot, Spain

Extraordinary Bachelor's Degree award

I have developed several individual and team projects during my degree:

- Complete 3D platformer video game for PC using Unity and C#.

- Use of Blender software (blender.org), making plug-ins with Python and learning kinetic chains, IK, applied to different characters in animated short film (as a Computer Animation's final project). Processing MOCAP data files.

- Implementation of the models Smoothed Particle Hydrodynamics (SPH), Position Based Dynamics (PBD) and Position Based Fluids (PBS), using Processing (Java) and Unity 3D (C#).

- Simulation of Soft Objects based on mass-spring model and simulation of ocean waves using Processing (Java).

- Simulation of Steering Behaviours and Boids Flocking (AI).

- Implementation of A* algorithm. Furthermore, I have introduced this into Steering Agents. Simulation of Pathfinding.

- GPU programming with C ++, OpenGl/GLSL and OSG, using vertex, fragment, geometry, tessellation and compute Shaders.

Work History

No doctor researcher   11/2017 – 7/2018
University Research Institute on Robotics and Information and Communication Technologies (IRTIC) - C/ Catedrático José Beltrán, 2, 46980 Paterna, Spain

University Research Institute on Robotics and Information and Communication Technologies (IRTIC), department LSyM.
Project: research and development of advanced technologies for simulation of port machinery.

Grant for the introduction to research 10/2017 - 12/2017
School of Engineering (ETSE) - University of Valencia - Av. de l'Universitat, s/n, 46100 Burjassot, Spain

Study of the viscosity in simulated fluids using the SPH model. Animation of non-Newtonian fluids. Task related to the Degree Final Project.

Collaboration student 06/2016 - 12/2016
University Research Institute on Robotics and Information and Communication Technologies (IRTIC) - C/ Catedrático José Beltrán, 2, 46980 Paterna, Spain

Researching the relationship between Wi-Fi signal rssi and its possible application in positioning a device in a closed environment. Moreover, I use Python to manage the large amount of data and Java to display the calculations in a graphical interface.

Web developer 09/2014 - 03/2015
Swim Club La Costera – Canals, 46650, Valencia, Spain

Creation of the website. Using Joomla, HTML5 and CSS3.