RAFAEL POLOPE CONTRERAS
MULTIMEDIA ENGINEER

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Education

University of Valencia (2017-2021)

Center where I graduated in **Multimedia Engineering** with an **average grade** of **8.2** .

Technical skills:

- **3D programs:** Blender and Unity.
- **Programming languages** : Java, Python, C, C++, C#, JavaScript, CSS, HTML5 and PHP.
- **Graphic libraries:** OpenGL (GLSL) and WebGL .
- **Frameworks** : Bootstrap, Vue.JS and React.
- Skills in Scrum development **methodologies** , **version control using** Git and SVN.
- Using the **MVC design pattern** .
- **Object-oriented programming.**
- Knowledge of the **graphic pipeline** for the development of **computer graphics** .

Featured projects:

- **Add-on for Blender** to facilitate the **implementation of VFX** as a Final Degree Project.
- Development of a **video game** .
- **XR application** with tourist applications for the city of Valencia using Unity.
- Development of **fluid simulations based on the SPH** model with **Python** , of fabrics using the **spring mass model** and **PBD** with **Processing** .
- Development of **AI algorithms** such as **A*** and **automatic behavior (" floking ").**
- Java **graphical application** emulating the Paint program based on the **MVC pattern.**

Extracurricular participations:

- Mentoring project for first year students.
- University competition in soccer, taekwondo and chess (in chess being champions by teams of the autonomous university tournament).

U-TAD (2022-Present)

Center where I am studying my Master's Degree in Computer Graphics, Simulation and Virtual Reality. In the master I am developing the following skills:

Technical skills:

- **3D programs:** Unreal, Unity and Houdini.

- **Programming languages:** Python, C++, C# and Matlab.
- **Graphics APIS:** OpenGL (GLSL) and Vulkan.
- **Version control** using Git with GitHub.
- **Design patterns:** Singleton, Pooling, Factory and Delegation.
- **Object-oriented programming.**
- Mathematical knowledge in **projective geometry**, **vector mathematics**, **computational geometry** and **numerical methods of integration** of equations.
- **Unity** and **Unreal** packages and tools for the creation of **VR and AR applications**, as well as **realistic rendering** .

Featured projects:
- **Scape** type Virtual Reality application **room**.
- **Simulation** of explosions and systems of particles, tissues and fractures with **Houdini**.
- Development of a **graphics engine using the OpenGL** APIs with **GLSL** and **Vulkan**.
- **Fluid solver in C++** as a practice of numerical methods of integration.

Experience

DESIGN AND TECHNICAL INNOVATION SL (02/2021-05/2021)

Company where I did the curricular internship of the degree at the university. During this period I had the following functions:

position :
- Internship Junior Programmer.

Tasks :
- Development of **web applications**, taking care of both the **Frontend** and the **Backend**, including a **responsive version** for mobile.
- **React course** carried out during the working period.
- I work with the use of **plugins for Frontend** .

Main technologies:
- Javascript,
- CSS3.
- PHP, with the use of the framework Codeigniter .
- HTML5.

LÃBERIT (09/2021-Today)

Company where I currently work as a programmer.

Position:

- Junior programmer.

Tasks :

- **Development and maintenance of web applications** for the Murcian Health System (SMS).

Work methodology:
- Agile.

Technology:
- **Backend** : Java (Spring), Hibernate with JPA and SQL.
- **Frontend** : JSF with the framework Primefaces .
- Unit tests with JUnit6.
- **Platforms** : Jenkins, Jira, Trello.
- **Version Control** : Git (and Gitlab) and SVN.

Soft Skills

- Ability to **work independently and in a team**.
- Ability to take the **initiative**, I have almost always ended up adopting an **organizing role** in the teams with which I have worked during my studies.
- **Creativity**. I have always been creative and with some artistic capacity.
- Ability to **learn quickly, passionate, curious** and **restless** about technology.
- **Languages**: English (Intermediate), Spanish (Native).

Courses and Certifications

- WORKSHOPS AND SEMINARS ON VUE.JS, REACT.JS, SCRUM, VIDEO GAMES AND ANIMATION
(2021) University of Valencia

- SDPC CERTIFICATE (CERTIFPROF)

(02/2022) SCRUM Developer Certificate by CertiProf

- ARTIFICIAL INTELLIGENCE APPLIED TO BUSINESS
(12/2022) SEPE