# NADIR ROMÁN GUERRERO

C++ Visualization Engineer

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## EXPERIENCE

### C++ Visualization Engineer

École Polytechnique Federale de Laussane — 2019 - Ongoing

Visualization engineer for the Blue Brain Project, focused on the development of Brayns, their large-scale visualization tool

- Improve communication with scientists to drive Brayns development to a useful software for their daily needs.
- Maintained and developed the code, increasing its performance, robustness, and overall usability and design.
- Collaborated with other engineering teams to implement project-wide features and pipelines for all our active tools.

### Software Engineer

University King Juan Carlos — 2018 - 2019

Software engineer developing a C++ remote rendering backend for neuroscientists in the Human Brain Project.

- Implemented a remote desktop solution that allowed to connect to an HPC network using a visual environment.
- Client application ran on a web browser.
- Enabled scientists to use heavy visualization tools from any device with internet connection.

### Software Developer Intern

CERN — 2015 - 2016

Intern in charge of the maintenance and development of CERN's internal cloud storage solution CERNBox

- Worked developing the backend, based on OwnCloud.
- Improved the frontend by increasing usability and fixing broken features.
- Created an application that enabled all CERN staff to browse all their files stored across different storage backends.

## VOLUNTEERING

### Core Developer

L2J Server

Software developer on a MMORPG server backend open source project.

## EDUCATION

### MSc in Computer Graphics

University King Juan Carlos — 2017 - 2018

### BSc in Software Engineering

University of Granada — 2011 - 2016

## CERTIFICATION

3D Modeling and animation with Blender

University of Granada

## PROGRAMMING LANGUAGES

- C/C++
- Python
- CMake
- Bash script
- Java
- C#

## SKILLS

### Technologies

CUDA, Boost, OpenGL/WebGL, Vulkan

### Tools

Unix CLI, CMake, GDB, Valgrind, Unity, Unreal Engine

### Operating systems

Linux, Windows

## LANGUAGES

**Spanish**
Native

**English**
Fluent

**French**
Basic

PUBLICATIONS

## Interactive visualization and analysis of morphological skeletons of brain vasculature networks with VessMorphoVis

Bioinformatics

*Marwan Abdellah, Nadir Román Guerrero, Samuel Lapere, Jay S Coggan, Daniel Keller, Benoit Coste, Snigdha Dagar, Jean-Denis Courcol, Henry Markram, Felix Schürmann*

07/2020

https://academic.oup.com/bioinformatics/article/36/Supplement_1/i534/5870503

## Metaball skinning of synthetic astroglial morphologies into realistic mesh models for visual analytics and in silico simulations

Publishing Company / Journal

*Marwan Abdellah, Alessandro Foni, Eleftherios Zisis, Nadir Román Guerrero, Samuel Lapere, Jay S Coggan, Daniel Keller, Henry Markram, Felix Schürmann*

07/2021

https://academic.oup.com/bioinformatics/article/37/Supplement_1/i426/6319688