

José Filipe Ferreira

COMPUTER SOFTWARE ENGINEER · HIGH PERFORMANCE COMPUTING

Real, Braga, Portugal

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Education

Minho University

Braga, Portugal

MASTERS IN COMPUTER SOFTWARE ENGINEERING

2020 - PRESENT

- Parallel Computing Paradigms
- Vectorization and Parallelization on Heterogenous Platforms
- Computer Vision
- Modelling and Visualization
- Illumination and Photo-Realism
- System Deployment and Benchmarking

Minho University

Braga, Portugal

BACHELOR IN COMPUTER SOFTWARE ENGINEERING (14/20)

2017 - 2020

- Programming Paradigms (Functional, Imperative, Object-Oriented)
- Software Engineering (Algorithms and Complexity, Program Calculus, Language Processing)
- Computer Architectures, Computer Graphics, Operating Systems
- Databases, Distributed Systems, Networks
- Math (Linear Algebra, Calculus, Logic, Discrete, Dynamical Systems)
- Physics (Modern Topics, Electromagnetism)

Skills

Programming C, C++, CUDA, GLSL, Bash, Python, Java, Rust, SQL

Tools Git, Linux, LaTeX, Docker, CI/CD

Languages Portuguese (native), English (C2 with Cambridge CPE)

Academic Projects

Dotprod

GitHub Repository

C, VECTORIZATION, CUDA

- Matrix Multiplication Optimization exploring Memory Access tuning and Vectorization
- Parallelization of the algorithm for heterogeneous servers with NVidia GPUs, using CUDA

Parallel Raytracer

GitHub Repository

C++, PARALLELIZATION

- Raytracer Performance Optimization for heterogeneous servers, where a Bounding Volume Hierarchy data structure was tested to improve the rendering performance of a pool of parallel workers

Terrain Generation

GitHub Repository

GLSL

- Terrain Generation based on OpenGL Shading Language (GLSL) and height maps

Engine

GitHub Repository

C++, OPENGL, XML

- Generic Graphic Engine capable of efficiently rendering any kind of scene defined in a XML configuration file

Extracurricular Activities

ENEI 2020

ORGANIZATION MEMBER, GRAPHIC DESIGNER AND PHOTOGRAPHER

- National Meeting of Computer Science Students focused on Talks and Workshops with various Companies
- Gained experience in Leading Teams and Organizing Large Events

Braga, Portugal

Feb. 2020

CeSIUM Collaborator @ Image Department

GRAPHIC DESIGNER AND PHOTOGRAPHER

- Gained experience working as a team in a asynchronous environment

Braga, Portugal

Set. 2018 - Nov. 2020

Official MiEI Discord

CO-CREATOR AND ADMINISTRATOR

- A community with 1700+ members focused on helping and mentoring new students

Discord

Feb. 2018 - PRESENT