

Braga, Portugal

Diogo Gonçalves

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Education

University of Minho

October 2016 – April 2022

- Master's in Software Engineering (spec in Computer Graphics and Parallel & Distributed Computing).
- Bachelor's in Software Engineering, July 2019.

Employment

Bsolus

October 2020 – November 2021

Software Engineer

- Designed and developed a Marketing Automation platform based on a microservices architecture with horizontal scalability. Developed the CI/CD pipeline integrating with the AWS.
- Maintained E-commerce platforms.
- Technologies utilized: NestJs, TypeScript, Docker, SQL, MongoDB, Terraform, GCP, Bitbucket, Jira, Git.

Technical Experience

Projects

- **Cactus3D** | C++, OpenGL, CMake, ImGui. Developed a rudimentary real-time 3D engine. Configurable elements include camera, light, and model via XML file.
- **Ray tracer** | C++, CMake. Implemented Ray tracing algorithms in C++ and CUDA, and optimized the implementation by adding features such as Russian roulette, Parallel BBVH, and multithreading.
- **Interactive Wind** | C++, GLSL. Developed a real-time heuristic wind simulation tested on a procedurally generated grass field. The focus of the project was to research known implementations of wind interaction with multiple objects and combine them into an immersive real-time solution.
- **Procedural Terrain Generation** | C++, GLSL. Developed a real-time procedural terrain generator using simplex noise. The focus of the project was to research terrain generation implementations and develop a natural-looking terrain scene.

Technical skills

- **Advanced** C++; C; Java;
- **Intermediate** GLSL; Bash; Python;
- **Basic** Vimscript; Lua; CUDA;

Languages

- Portuguese - Native speaker
- English - C1 level