

Braga, Portugal

# Diogo Gonçalves

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## Employment

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### 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.

## Education

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### University of Minho

October 2016 – April 2022

- Master's degree in Informatics Engineering specialized in Computer Graphics and Parallel & Distributed Computing.
- Bachelor's degree in Informatics Engineering, July 2019.

## Technical Experience

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### Projects

- **Cactus3D**. Developed a rudimentary real-time 3D engine. Configurable elements include camera, light, and model via XML file. Tools utilized contain C++, OpenGL, and ImGui.
- **Ray tracer**. 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**. 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**. 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

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

## Languages

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- Portuguese - Native speaker
- English - C1 level