

Braga, Portugal

# Diogo Gonçalves

+351 933777932  
diogo.goncalves@gmail.com  
goncalves-diogo.me

## Employment

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### Bsolus

October 2020 – Present

Software Engineer

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

## Education

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### University of Minho

2016 – Present

- 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

- **Ray tracer** (2020 - Current). Implemented Ray tracing algorithms in C++ and CUDA, optimized the implementation by adding features such as russian roulette, Parallel BBVH, multi-threading.
- **Interactive Wind** (2020). Developed a real time realistic wind simulation in GLSL. Focus of the project was to research known implementations of wind interaction with multiple objects and combine them into a realistic solution to integrate with an engine using shaders.
- **Procedural Terrain Generation** (2019-2020). Developed a real time procedural physically accurate terrain generator. The focus of the project was to research and implement graphical algorithms published on research papers. Then combine them into a procedural terrain generator using shaders.

## Technical skills

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

## Languages

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- Portuguese - Native speaker
- English - C1 level