Braga, Portugal

Diogo Gonçalves

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Employment

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 Google Cloud Platform.
- Maintained E-commerce platforms.
- Techonologies utilized included: NestJs, TypeScript, Docker, SQL, MongoDB, Terraform, GCP, Bitbucket, Jira, Git, PHP, SQL.

Education

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

Projects
- **3D Engine** (2021 - Current). Developed a 3D Engine that supports integration with shaders. Supports rasterization and ray tracing. Increased skills in C++ and MSDN.
- **Ray tracer** (2020 - Current). Implemented Ray tracing algorithms in C++ and CUDA, optimized the implement 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 papares. Then combine them into a procedural terrain generator using shaders.

Technical skills
- **Advanced** C++; C; GLSL; Python; TypeScript
- **Intermediate** Bash; Lua; Vimscript; Javascript; Nestjs; SQL;
- **Basic** Haskell; Prolog; Flex/Yacc;

Languages
- Portuguese - Native speaker
- English - C1 level