Andrés Millán Muñoz

DEVOPS · MATHEMATICIAN

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Skills

Statistics	Monte Carlo methods for light transport simulation
Programming languages	Rust, Java, C++, Python, Javascript, Ruby, R, Julia, Sage, Maxima, GLSL, SQL
DevOps	Git, Docker, CI/CD (Github Actions and Pages), Nix, infrastructure as code
Backend	Java Spring, REST APIs
Frontend	Astro, HTML, CSS
Documentation and agile toolkit	Markdown, LaTeX, Confluence, Jira
Software	Visual Studio Code, Figma, Unity, Jupyter notebooks
Languages	Spanish (nativo), English (proficient), French (beginner)

Work experience

T-Systems Iberia - BMW

Granada

SOFTWARE DEVELOPER & DEVOPS

October 2022 - Today

- Part of BMW's Smart Factory Life Planning international development team, a project to virtualize the factory's production line, making it fully interactive in a 3D environment using Nvidia's Omniverse.
- Maintained and develop backend services for the project, using Java, and Spring Boot.
- Maintained a Rust extension for Omniverse which acts as a resolver, integrating legacy backends inside the aforementioned rendering engine
- Designed and implemented the CI/CD pipeline for the project using Github Actions.
- Deployed backends to the Azure Kubernetes cluster using Helm, migrating from on premise servers.

Projects

Real time raytracing accelerated by GPU

Granada, Spain

GITHUB.COM/ASMILEX/RAYTRACING

June 2021 - July 2022

- Thesis of the Bachelor's Degree in Computer Engineering and Mathematics. Research of how to simulate light in real time using raytracing.
- Implemented a Vulkan path tracing engine based on Monte Carlo integration using Nvidia DesignWorks' Nvpro-samples library. The engine is hardware accelerated on modern Nvidia's RTX GPUs. The project was inspired by Ray Tracing In One Weekend series
- Analyzed the quality of the image in terms of rendering time and noise of the reconstruction.
- Designed and implemented a CI/CD system to build and deploy the documentation of the thesis. Based on Github Actions and custom Docker container images.

Homelab

A SMALL PERSONAL SERVER

December 2022

Docker compose-based personal homelab server running on RHEL9 used by multiple users. Running multiple selfhosted services for personal use: SFTP server, monitoring (Dozzle, Portainer, Uptime Kuma), URL shortener (golinks), photograph storage (Immich), backups (Restic) and more Secured using VPN (Tailscale)

CherryTrip - UX Case Study

Granada, Spain

ASMILEX.GITHUB.IO/DIU21

March 2021 - May 2021

- Analyzed, designed and mocked up an application for traveling in Granada for the pandemic era
- Deployed the result to Github Pages
- Used Figma to design the mockups

Crystalshot

Jaén, Spain

GITHUB.COM/ASMILEX/CRYSTALSHOT

June 2020

- A little arcade game about crystals made for a homemade gamejam.
- Developed using Unity. Multiplayer for up to 4 players.

Education

Mathematics and Computer Engineer bachelor's degree

Granada, Spain

GRANADA UNIVERSITY

September 2017 - June 2022