Erwan VIVIEN

Engineering student in Computer Vision and Computer Graphics at EPITA

Education

EPITA 5th year, Paris

- Computer graphics major (image rendering / processing)
- International section
- Programming teaching assistant

TOEIC, score 920

Work Experience

EPITA, Paris – Teaching assistant

Sept. 21 – Now

Selected to teach 3rd grade students C, C++, Java and JavaScript. In a team of 45, the role demands preparing subjects and exercises for over 800 students.

Expleo group, Dublin — Software developer

Sept. 21 – Feb. 22

Tool creation to **assist pentesters** in finding and patching vulnerabilities. Gathering, saving data to automate redundant checks, verifying if the cybersecurity vulnerability has been patched.

CareGame, Paris – Software developer

June 20 – July 20

Manipulating **GStreamer's** pipelines to add a timestamp to an input video stream. Processing the output's timestamp by integrating **Tesseract OCR** in order to estimate the streaming latency.

Projects – All on GitHub

QRCode Generator – Rust
erwanvivien/fast_qr
Implementation of ISO 18004 on my free time, with focus on CPU optimizations and WASM. This library is **~9x** faster than the standard Rust QRCode library

Raytracer – Rust
erwanvivien/isim_raytracer
Reflections, shadows, configurable scene using JSON. Can draw rectangles, spheres, planes and any recursive shape (Menger Sponge…)

Video Codec – Python
Educational implementation using macroblocks algorithm

Harris corner Detect. – Cuda
Lycoon/harris-cuda
C++ and GPU implementation. Using GPU provided a x20 speedup

Image Equalization – Cuda
erwanvivien/irgpua
Usage of different patterns (Histogram, Scan, Reduce, Compact, Map) heavily optimized using decoupled loop-back.

Game Engine – Rust / WGPU
erwanvivien/mjolnir
Backface Culling, Shaders, Instancing, Depth Buffer, Model loading with ambition to create a working game

Raft Implementation – Rust
erwanvivien/algorep
Implementation of the Raft Consensus Algorithm. Works with more than 1000 servers.

Socials

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Github: erwanvivien
Online CV: xiaojiba.dev/CV

Skills

Programming languages
Rust, C++, C (Expert)
C#, Python, Java, JavaScript, TypeScript (Advanced)

Utilities
Git, Bash/Shell, NextJS (Expert)
CUDA, Unity (Advanced)

Business Skills
Analytical, Communication, Teamwork and collaboration, Leadership, Autonomy

Languages

French – Mother tongue
English – Fluent
German – Basic
Chinese – Basic

Interests

Wall climbing
Open source
Sorting algorithms