Lily Haverlag
Engine & Graphics Programmer

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About Me

I have a passion for creating user-friendly tools and smooth experiences through low-level, performant, and readable code. With my proficiency in C, C++, and Rust, I enjoy the challenge of pushing hardware to its limits.

Education

Breda University of Applied Sciences

Bachelor of Creative Media and Game Technologies – Programming
September 2020 – July 2024

Projects:

University Projects & Internship

- **Sub Nivis**

2022 | C++ | 20 people | 4 months

- Custom game engine in C++
- Retro style first person shooter game
- Created the rendering back-end code with OpenGL

- **Metal render back-end**

2024 | Rust | Internship | 10 months

- Porting an existing DirectX 12 render back-end to Apple's Metal API
- Strengthened my capabilities in memory safety and thread safety practices
- Learning to work with new APIs and tools in a short time

Personal Projects

- **Sub Nivis PlayStation 1**

2024 (in progress) | C

- Rebuilding Sub Nivis from scratch in C
- Optimized to run in real time on PlayStation 1 hardware

- **DirectX 12 renderer**

2024 (in progress) | C++

- 3D renderer from the ground up using DirectX and C++

- **Game Boy Emulator**

2022 | Rust

- Tested with original Super Mario Land, Pokémon Blue, Tetris ROMs
- Audio support

Skills

- **Programming languages**: C, C++, Rust
- **Graphics APIs**: OpenGL, DirectX 12, Metal
- **Tools:** Git, Perforce, Jira (Scrum)
- **Languages**: Dutch, English, French (limited)