Lily Haverlag
Engine & Graphics Programmer

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About Me

I have a passion for creating user-friendly development tools and smooth gaming 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++
  - 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

Personal Projects

- **Sub Nivis PlayStation 1**

2024 (in progress) | C
  - Rebuilding Sub Nivis from scratch, using 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
- **Source Control:** Git, Perforce
- **Languages**: Dutch, English, French (limited)