

# VILLE KUUSELA

## SOFTWARE DEVELOPER

### About me

Enthusiastic about graphics programming, modern C++, Linux/BSD operating systems and other highly technical aspects of the field. I have a background in music and love all things mathematical. Currently I'm working on my last project at Hive Helsinki coding school, a full stack app, and learning about Vulkan and webgpu.

### PERSONAL PROJECTS

#### Raytracer - C++, SDL3

I'm developing a raytracer for personal use as my big forever project. It has so far taught me a lot about project planning, build systems, modern C++, breaking circular dependencies, OOP patterns and most importantly how to implement algorithms related to graphics programming. My biggest use case for it is to continue learning and to have visual comparisons available for my implementations.

July 2025 - Ongoing

#### IRC-Server - C++

A group project I did at Hive Helsinki. A lightweight implementation of an IRC server. My responsibilities were parsing incoming data as per IRC protocol and passing valid commands to the server. The project taught me a lot about parsing techniques and separation of concerns, as I worked on it with others.


August 2025 - September 2025


#### Ping Pong Fullstack 2025 - TS, Astro, Preact

Our final group project at Hive Helsinki I'm currently working on with my team. It is a full stack application that includes 2 games to play on the browser. My responsibilities are 3d rendering (Babylonjs) and client side communication for the Pong game. The project teaches a lot about web development and division of responsibilities to create a complete application with a team of 5 people.

### LINKS

[ville.m.kuusela@gmail.com](mailto:ville.m.kuusela@gmail.com)

 [Ville Kuusela](#)

 [v-kuu](#)

[Shadertoy - v\\_kuu](#)

### SKILLS

#### PROG. LANGUAGES

C [\*\*\* - -]

C++ [\*\*\* - -]

GLSL [\*\*\* - -]

Go [\*\* - - -]

Javascript/Typescript [\*\* - - -]

Python [\*\* - - -]

#### LIBRARIES/SDKS

SDL3 [\*\*\* - -]

SFML [\*\*\* - -]

Vulkan [\* - - - -]

Babylonjs [\*\* - - -]

Preact [\* - - - -]

Astro [\* - - - -]

#### TOOLS

CMake [\*\* - - -]

Git [\*\*\* - -]

Docker [\*\* - - -]

Deno [\*\* - - -]

Bun [\*\* - - -]

Nodejs [\* - - - -]

Vite [\* - - - -]

#### DEVOPS

GitHub Actions [\*\* - - -]

Azure [\* - - - -]

#### LANGUAGES

Finnish : native

English : C2

Swedish : A1

## [AsteroidGame - C++, SFML, GLSL](#)

I wanted to learn to use the SFML library for an upcoming Supercell internship challenge, so I made a little Asteroids inspired game using the library. I learned how to better handle user input and how to implement my own shaders into a real program.

October 2025 - November 2025

## [ShaderTool - C++, SDL3, Vulkan](#)

I really like Shadertoy, but understandably it is quite limited. I started developing my own tool for tinkering with shaders across the entire graphics pipeline. My hope is to learn Vulkan well and other shader types aside from fragment shader.

November 2025 - Ongoing

## WORK EXPERIENCE

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### Freelance Musician

Self-employed / light entrepreneurship. I travelled all around Finland with various artists and bands. Networking, teamwork, accountability and taking ownership of your own work were highly important skills to master.

2016 - 2024

## EDUCATION

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### Hive Helsinki

Private nonprofit coding school following the 42.fr curriculum. Strong fundamentals in C and C++. Uses a peer-to-peer model, where everything is student led. Initiative taking, ownership, teamwork, code reviews and other soft skills are a big focus.

2024 - ongoing

### Metropolia AMK - Bachelor of Music

I learned strong fundamentals in music theory, composition, arrangement and orchestration.

2019 - 2023