

# ETHAN GILL

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## Technical Skills

**Languages:** TypeScript, C#, Python, C++, Bash, Rust, Nix, Lua

**Frameworks:** Vue.js, Node, React, .NET, Next.js, Django

**Tools:** Git CLI, Neovim, LSP, Docker, CMake, Nix, VSCode

**Concepts:** API Design, State Management, Performance Optimization

**Operating Systems:** Linux, Windows

## Education

**University of Calgary**

**Sep. 2019 – April 2024**

*BSc. Software Engineering*

*Calgary, Alberta*

- Key Coursework: Data Structures and Algorithms, Operating Systems, Web Development, Database Management

## Experience

**Sunwapta Solutions**

**September 2022 – Present**

*Full Stack Developer*

*Calgary, Alberta*

- Worked with **Vue** and **.NET** to create and design solutions to client's unique business problems.
- Worked on **production code** used by **hundreds of thousands** of users in the grocery retail industry.
- Integrated various **business APIs** together to create a cohesive product.
- Collaborated and integrated with **external and internal** teams.

**PulseMedica**

**May 2022 – September 2022**

*Full Stack Developer Intern*

*Edmonton, Alberta*

- Worked with **React** and **TypeScript** to design and implement a frontend medical application used by ophthalmologists for surgical planning.
- Gained experience with developer processes (AGILE) and **git** branching methodologies.
- Performed automated frontend testing using the **Vitest** framework.
- Collaborated and integrated with other teams (ML, electronics).

## Projects

**Heart Imaging Visualization** | *React, Python, Django*

**Fall 2023 - Winter 2024**

- Built a web application to visualize data from heart scans for the engineering capstone project.
- Optimized the heart scan parser, and **docker** build resulting in **50x** and **40x** speedups respectively.
- Collaborated with team members to improve **code quality** and minimize **technical debt**.

**Virtual Orrery** 🐙 | *C++, Vulkan*

**Fall 2023**

- Designed and implemented a **3D model** of the sun, earth and moon using the **C++ Vulkan** API.
- Used **linear algebra** and concepts from **computer graphics** to implement **ray-tracing**.
- Added **shadow casting** and axial/orbital tilt angles to celestial bodies (earth, moon).

**Worm-rs** 🐙 | *Rust, CLI*

**Fall 2023**

- Built a **Rust** implementation of the classic worm game for the console.
- Learned the fundamentals of **Rust**, the **borrow checker**, and **state management**.
- Experimented with **algorithms** for generating a random number of **n** positions in a 2D space.

## Languages

TypeScript ★★★★★

C# ★★★★★

C++ ★★★★★

Bash ★★★★★

Lua ★★★★★

Rust ★★★★★

## Hobbies

**Linux Dotfiles:** I love to tinker and tweak with my Linux setup for my personal machines.

**Language Learning:** You can often catch me reading Japanese novels on my e-book during weekends.