# Neo Hyldelund

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# Summary

Software engineering student with deep experience in C++, Java, and systems-level programming. Skilled in engine design, AI behavior modeling, and test-driven development. Passionate about performance optimization, modular code, and shipping polished tools in collaborative environments.

## Education

#### **Simon Fraser University**

Burnaby, BC

Bachelor of Science in Computing Science

Expected 2027

Data Structures & Algorithms, Software Engineering, AI & Machine Learning

# Experience

Vancouver Olive Oil Company | Sales Associate | Vancouver, BC

Feb. 2023 - Jun. 2023

- Educated customers on over 30 specialty products, boosting product trial rates and driving a 20% increase in bundled purchases.
- Implemented a new sampling layout that improved foot traffic flow and led to a 10% increase in weekend sales.

Coop SuperBrugsen | Sales Associate | Copenhagen, Denmark

Jul. 2020 - Apr. 2021

• Supported a multilingual customer base by providing service in English, Danish, and Russian enhancing customer satisfaction in a high-volume retail environment.

# **Personal Projects**

**Doom Clone 3D Game** | GitHub | C++ / OpenGL / GLM / GLTF / A\* / JSON

Jul. 2025 - Pres.

Created an original rendering engine with fully integrated movement and pathfinding

- Reduced frame time variance by 32% by optimizing OpenGL draw calls and batch rendering.
- Built glTF mesh loader from scratch using nlohmann::json, supporting 30+ unique textured assets.
- Implemented A\* enemy AI and collision physics, resulting in dynamic, real-time gameplay at 60+ FPS.

Personal Portfolio Website | GitHub | Website | NextJS / TailwindCSS / ThreeJS / RTB

Jun. 2025 - Pres.

Clean, mobile-optimized personal site showcasing projects and code samples.

- Increased user engagement by ~40% by integrating interactive 3D elements using Three.js and React Three Fiber to create
  an immersive landing experience.
- $\bullet \ \ Improved \ performance \ by \ reducing \ 3D \ asset \ size \ by \ 40\% \ through \ custom \ shader \ optimization \ and \ geometry \ simplification.$
- Accelerated build time by 60% by implementing dynamic imports and static route generation in Next.js, streamlining deployment and dev workflows.

Grow-the-Hoard | GitHub | Java / Maven / OpenGL / LDtk / JUnit

Jan. - Mar. 2025

Collaborated on a team of 4 to develop a top-down maze game with intelligent enemy behavior.

- Wrote core logic and pathfinding using A\* on custom level formats (LDtk).
- Achieved 100% unit test coverage with JaCoCo; CI-tested using GitHub Actions.
- Presented to a class of 80+ with live gameplay demo and source code walkthrough.

### Technical Skills

Languages: C++, Java, Python, JavaScript, SQL

Frameworks/Libraries: OpenGL, glTF, GLM, JUnit, Next.js, TailwindCSS

Tools: Git, Visual Studio, VS Code, Postman, JIRA, JaCoCo

Concepts: ECS architecture, pathfinding, async rendering, TDD, CI/CD, real-time input handling