Neo Hyldelund

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Technical Skills

Languages: JavaScript, Java, C++/C, SQL
Frameworks/Libraries: React, NextJS, Express, JUnit, NodeJS, Tailwind CSS,
Databases: MongoDB, MySQL, PostgreSQL
Tools & Platforms: Git, OpenGL, GLTF, VS Code, Visual Studio, Postman, JIRA

Academic Technical Projects

Grow-the-Hoard (Java, Maven, OpenGL, LDtk) Jan. 2025 - Mar. 2025
Java based, custom level designed, 2D top-down maze game

- Developed from scratch in a team of four, creating a fully functional 2D maze game using **Java**, LDtk level editor for level design, **OpenGL** for rendering, and **Maven** for project management.
- Designed and programmed AI-driven enemies using **A* pathfinding**, enabling them to dynamically pursue the player.
- Ensured team cohesion by maintaining deadlines, actively participating in meetings, and fostering a collaborative and respectful work environment.

Personal Technical Projects

Personal Portfolio Website (NextJS, TailwindCSS) June. 2025
Introductory portfolio website, with a sleek and simple design

- Built a responsive personal portfolio to showcase technical projects and development experience using modern web frameworks like **Next.js** and **Tailwind CSS**.
- Designed modular, **reusable React components** for a clean, minimalist interface with smooth navigation and accessible design.
- Self-hosted the site with custom domain configuration, **performance optimization**, and **mobile-first responsiveness** for consistent cross-device experience.

Doom Clone 3D Game (C++, OpenGL, GLM, GLTF, A*, JSON) Jul. 2025 - Present
First-person shooter game, inspired by Doom (1993)

- Built from scratch in **C++** using **OpenGL**, implementing a custom **glTF model loader** with **nlohmann::json** to render textured 3D assets with support for full transformation hierarchies.
- Designed a modular **AI enemy system** with **A* pathfinding** on a tile-based graph, enabling real-time pursuit behavior and adaptive movement.
- Developed a procedural **2D-to-3D level generation system**, featuring custom mesh creation, collision detection, and dynamic map scaling.
- Integrated **shader-based lighting**, matrix-driven **camera controls**, and real-time **view/projection transformations** to simulate immersive first-person gameplay mechanics.

Education

Simon Fraser University Burnaby, BC
Bachelor of Science in Computing Science, *Sep. 2023 - Expected Graduation: May 2027*

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