NEO HYLDELUND

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EDUCATION

Simon Fraser University   Burnaby, BC
Bachelor of Science in Computing Science   *Expected May 2027*
Data Structures & Algorithms, Software Engineering, AI & Machine Learning

PROJECTS

Personal Portfolio | GitHub | Website | *NextJS / TypeScript / TailwindCSS / ThreeJS*   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.
- 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.

Model Renderer | GitHub | *C++ / OpenGL / GLM / GLTF / A* / JSON*   Jul. 2025 - Pres.
Created an original rendering engine with fully integrated movement and pathfinding
- Developed a custom rendering engine from the ground up, json parsing, model loading, and camera controls.
- Optimized OpenGL draw calls and implemented batch rendering, reducing frame time variance by 32%, which significantly improved overall smoothness and responsiveness.
- Built a glTF mesh loader using nlohmann::json, enabling support for 30+ unique textured assets with efficient handling of transformations, materials, and buffers.

Hands-Off | GitHub | *Python / Faster-Whisper / Porcupine / Spotipy*   Jul. - Aug. 2025
Designed a privacy-first voice assistant using real-time transcription and voice command recognition.
- Enabled 100% hands-free music control via wake word and GPT-assisted command parsing.
- Deployed hybrid async pipeline for <250ms voice response latency.
- Supported 10+ voice intents including playback, playlist switching, and volume control.

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: JavaScript, TypeScript, Python, C/C++, Java, SQL
Frameworks & Libraries: React, Next.js, Node.js, Express, TailwindCSS
Databases: MongoDB, PostgreSQL, MySQL
Tools: Git, Postman, JIRA, VS Code
Concepts: Asynchronous programming, API integration, performance profiling

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.

Coop SuperBrugsen | Sales Associate | *Copenhagen, Denmark*   Jul. 2020 - Apr. 2021
- Delivered multilingual support (English, Danish, Russian) to a diverse customer base, improving satisfaction and efficiency in a high-traffic retail environment.