

TYLER BEACH

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EDUCATION

University of Alberta

Edmonton, AB

Bachelor of Science - Computer Science

December 2025 (Expected)

Relevant Coursework: Software Engineering, Data Structures and Algorithms, Database Management

PROJECTS

Event Horizon | *Java, Firebase, Git, UML*

[Repository](#)

- Developed a user-friendly **Android application for Software Engineering course**, adhering to design principles throughout development allowing for clean and maintainable codebase
- Collaborated on design and implementation, ensuring seamless integration of features and alignment with course objectives, resulting in a highly functional and user-friendly application
- Implemented Firebase within the app, ensuring **real-time updates** of event details and attendee status, and delivering **instant notifications** to enhance user engagement and provide a professional app experience

Story Teller | *React, JavaScript, CSS, Python, Flask, OpenAI, ElevenLabs*

[Repository](#)

- Developed web application that creates children's stories with accompanying images and narrates them using text to speech technology for a unique experience every time
- Integrated **OpenAI's generative text API** for story generation and utilized ElevenLabs for high-quality **text to speech narration** to enhance user experience
- Contributed to a **team-driven project** during a competitive **hackathon**, collaborating closely with peers to develop the application in a timely manner

Algorithm Visualizer | *React, Javascript, Tailwind*

[Live Demo](#)

- Developed an interactive web application to visualize various sorting and pathfinding algorithms, enhancing understanding of algorithmic concepts and their behaviors
- Designed and developed a pathfinding feature that demonstrates algorithms like Dijkstra's, Breadth-First Search (BFS), and Depth-First Search (DFS), illustrating their effectiveness in finding the shortest path in a grid

FireSafe | *Python, TypeScript, HTML, CSS, Streamlit, TensorFlow, MongoDB*

[Repository](#)

- Engineered a **full-stack web application** within a **48-hour deadline** for a climate activism hackathon, focusing on real-time forest fire alerts
- Ensured product robustness and scalability, placing in the **top 6 out of 200 participants**
- Utilized Git for **version control**, managing feature branches, and tracking changes throughout the development process

SKILLS

Languages: Python, Javascript, Typescript, Java, C, SQL, CSS, HTML

Technologies: Firebase, MongoDB, Linux, Git, Github, Figma

Libraries: React, Next.js, Flask, Tailwind, Bootstrap, Axios