Aiden Kerr

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EDUCATION

The University of British Columbia   Vancouver, BC
Bachelor of Science in Computer Science, GPA: 3.8   *Sept. 2019 – May 2025*

EXPERIENCE

Software Engineer Intern   May 2022 – Aug. 2022
SAP, Concur Travel   *Vancouver, BC*
- Configured deployment and networking using Kubernetes, Helm, Docker, Cloudformation and shell scripts.
- Improved security by leveraging Cloudwatch, Kibana, and MySQL to investigate database connection details.
- Reconfigured a redundant AWS instance for development and production environments, saving $500 a year.
- Weighed pros/cons of running script at runtime vs buildtime to increase service stability and reduce maintenance.

Software Engineer Intern   Sept. 2021 – Apr. 2022
Realtor.com   *Vancouver, BC*
- Developed multiple React/Next.js shareable components and pages written in both JavaScript and TypeScript, including building the legend and modal for the wildfire risk map.
- Prevented page-crashing bug by adding missing points to incomplete polygons in the properties map.
- Fixed state syncing issues by validating out-of-order responses.
- Reduced page load times by reworking API calls with GraphQL to cut number of calls by 50%.
- Prevent unnecessary redirects and 404s by fixing URL generation and parsing inconsistencies.
- Initiated cross-team interest in WebAssembly with an informational slideshow, leading to new prototype project.
- Maintained over 80% test coverage using Jest and React Testing Library.

PROJECTS

Balloonium | *C++, OpenGL, GLSL*   Sep. 2023 – Dec. 2023
- Developed 2D game with team of 6 in a custom engine using C++ and OpenGL for CPSC 427.
- Implemented electric player attack with custom electricity shader made by displacing UV coordinates with noise.
- Created shaded sprites using the Blinn-Phong model and normal maps.
- Implemented smooth camera movement using linear interpolation.

Water Demo | *C++, OpenGL, GLSL*   Aug. 2023
- Displaced vertices by sum of multiple sine functions to mimic water movement.
- Created fragment shader with directional lighting, allowing for surface specular lighting.

Kerrdit | *JavaScript, React, Node.js, Express, MySQL*   July 2021 – Aug. 2021
- Created a Reddit-like application with users, posts, and communities.
- Developed a full-stack React web application using Express to build a REST API.
- Implemented SQL queries to manage user data, enable post creation and facilitate voting functionality.

GitLOVE - MLH | *React, JavaScript, Ionic, Firebase, BiwaScheme*   July 2020
- Created a dating app for programmers that allows users to send programming snippets to their matches.
- Developed a progressive web app using Ionic Components to read and write data to Firestore (NoSQL).
- Built custom Scheme-like functions that draw on the HTML canvas using the BiwaScheme interpreter.

Quadoodle | *JavaScript, React, Firebase, HTML Canvas*   June 2020
- Created multiplayer turn-based drawing game where four players collaboratively draw an object.
- Implemented game sessions by storing game data on Firebase.
- Created drawing system using HTML Canvas.

TECHNICAL SKILLS

Languages: JavaScript, Java, TypeScript, Python, C++, SQL
Libraries/Frameworks: React, OpenGL, Next.js, Node.js, Express.js, JUnit
Other Technologies: Git, MySQL, GraphQL, Docker, Amazon Web Services (AWS), Kubernetes, Firebase, Firestore
Testing/Debugging: Jest, Mocha, React Testing Library, JUnit, GDB, Valgrind