

KIRBY RODRIGUEZ

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TECHNICAL SKILLS

Languages: C, C++, C#, Java, HTML, CSS, JavaScript, TypeScript, R, SQL

Frameworks & Tools: React, Node.js, Redux, Azure DevOps, Jest, Maven, RStudio

EXPERIENCE

Software Engineer Intern

May - August 2023

Microsoft

Redmond, WA, United States

- Created personalized experiences for the Windows taskbar widgets menu including custom greetings based on time of day, weather, and global events displayed to over **100 million** PC's on Windows 11.
- Created and refactored Typescript web components to integrate new API calls in light-weight containers to maximize response time and minimize resource use while also **reducing** the amount of existing components to a robust subset.
- Wrote unit tests using jest and visual parity tests for **100%** code coverage and UI baseline verification to ensure consistency with prod environments.
- Collected Titan Analytics scorecard data to determine a **2.38%** increase in user engagement with a p-value **less than 0.05**.
- Nominated by leadership team as one of the top web experiences intern projects and received the opportunity to present work and results to WebXT CEO.

Software Engineer Intern

May - August 2022

Microsoft

Vancouver, BC, Canada

- Designed and implemented a feature for the MSN Weather Page using Typescript React & Redux to allow users to compare current weather forecasts against past forecasts and visualize changes.
- Created Falcon API controllers using C# to handle **thousands** of requests per second for past forecast data from Microsoft's weather forecast database with a **0.3 second** response time.
- Scaled service up to handle global deployment with the ability to receive **240 hours** of forecast data from up to 5 days ago for every weather station in the world.
- Worked with data scientists to test, debug, and optimize web API's to improve data collection speeds and product managers to assess usability and engagement rates of the feature after deployment.

PROJECTS

Hidden Markov Approach to Self-Evolving Detection Systems | RStudio

October - December 2022

- Used R and RStudio to create and train a hidden markov model to detect anomalous behaviour using training data and then tested the model on real-life anomaly-injected data to simulate malicious activity detection.
- Performed Principal Component Analysis to isolate the most influential variables of the dataset to determine which variables to use when training the model.
- Trained models with a large data-set of real life power grid data and various selected time windows and parameters to optimize for lowest log-likelihood, minimal complexity, and neither overfit nor underfit to select the best model.
- Correctly identified **100%** of anomalies in all anomaly-injected data-sets with high likelihood and precision.

Study Buddy for nwHacks Hackathon 2022 | MongoDB, Express, React, Node

January 2022

- **Won Microsoft sponsor prize** for best use of Azure Communication Services UI Libraries by using Microsoft Azure Communication Services API to create live video call functionality.
- Created a MERN web app using JavaScript designed to help students find people in similar courses to study with and options to communicate such as real-time chat and video call.
- Implemented a live chatroom feature using JavaScript with **up to 5000** chat history messages saved on a Google Firebase database.
- Used React and Bootstrap to design the front-end following conventional design heuristics.

EDUCATION

Simon Fraser University

September 2020 - Present (Grad May 2024)

BSc. Computer Science, GPA: 3.69

Burnaby, BC, Canada

Deans Honour: Summer 2021, Fall 2021, Spring 2022, Fall 2022, Spring 2023

Open Scholarship: Spring 2023, Summer 2023, Fall 2023