

# Faseeh Irfan

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## EDUCATION

### University of Waterloo

Waterloo, ON

Bachelor of Software Engineering, Honours

Sept. 2022 – Apr. 2027

- President's Scholarship of Distinction, Waste Connections Canada Scholarship, BC Achievement Scholarship
- Relevant Coursework: Computer Architecture, Digital Logic, Software Theory, User Experience (UX)

## TECHNICAL SKILLS

**Languages:** TypeScript, C++, Python, Swift, Java, SQL, VHDL

**Technologies:** React, Node.js, Docker, AWS, PostgreSQL, Material-UI, MongoDB, Axios, Socket.IO

## EXPERIENCE

### Software Engineer Intern

May. 2023 – Present

[Constant Health](#) | TypeScript, React, Swift, PostgreSQL, AWS, MUI

- Boosted webpage quality with virtualized pagination and infinite queries, raising Google Lighthouse performance by **86%**.
- Designed and developed an analytics system using **MUI**, enabling users to view graphs of weight and nutrition statistics, filter by nutrient, sort by date, and view daily/weekly/monthly averages.
- Streamlined error handling with a reusable Sentry reporting function, **reducing incidents by 30%**.
- Developed a broadcast/auto-reply message feature with distinct views for admins/clinicians, increasing message reach.
- Spearheaded the implementation of **100+ ESLint rules**, elevating code quality, performance, and maintainability.
- Standardized font styles across the entire application, ensuring a consistent and professional visual experience for users.

### Software Developer

Sept. 2022 – Jan. 2023

[UW Orbital](#) | JavaScript, React, MUI

- Developed components of a web-app such as a CLI using **React**, enhancing inter-service communication speed by **20%**.
- Led the implementation of a dashboard handling requests & telemetry data using **React**, improving decision making.

### Software Developer

Sept. 2019 – Jun. 2021

[Seaquam Robotics](#) | C++, VEX V5

- Programmed robot for autonomous and remote control, achieving a **VEX World Championship Qualification**.

## PROJECTS

🔗 [Chatty - Messaging App](#) | JavaScript, React, Node.js, Express.js, MongoDB, Socket.IO

- Developed a multi-page user interface using **React** and **Chakra-UI**, gaining over **100+** users.
- Created APIs for searching for users, creating chats, and sending messages using **Node.js** and **Express** with **MongoDB**.
- Defined complex schemata, models, and querying services to handle user and chat data using **MongoDB**.
- Implemented an encrypted login and registration system using **bcrypt** & **JWT**, enhancing app security.

🔗 [soloCar](#) | C++, Arudino Uno R3, HC-SRO4 Sensors

- Worked in a team of 4 to build an Arduino powered autonomous car that seeks light rich areas using photo-resistors.
- Programmed an object avoidance algorithm using HC-SRO4 Ultrasonic Sensors and DC Motors.

🔗 [CubeQuest](#) | C++, VEX V5, Robot Mesh Studio

- Designed and programmed a CAD model for a robot prototype to autonomously collect and move cubes to the end zone.

🔗 [FPGA-based HVAC Control System](#) | VHDL, FPGA

- Developed an HVAC System Simulation using behavioral **VHDL** and custom designed components.
- Integrated with hardware such as a 7-segment display, switches, and buttons, streamlining user control.

🔗 [A\\* Pathfinding Visualizer](#) | Python, PyGame

- Implemented the A\* Algorithm to find the shortest distance between two nodes **while navigating obstacles**.
- Added functionality to allow the user to reset and manipulate the field.