

# Rayyan Huda

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## Education

### University of Waterloo

Sept 2024 – Present

BASc in Systems Design Engineering — GPA: 3.5

- **Relevant Coursework:** Data Structures and Algorithms, Digital Computation, Digital Systems

## Experience

### Front-End Developer

Cambridge, ON

Rhythm & Blues Cambridge, Dumbo Octopus Consulting

Jan 2025 – April 2025

- Developed and deployed multiple front-end components using HTML, CSS, and vanilla JavaScript, contributing to a **35%** increase in site responsiveness and improved cross-browser compatibility.
- Designed **10+** responsive webpage wireframes and high-fidelity mockups in **Figma**, incorporating board directors' feedback, to focus on UX development and improve site structure.
- Optimized UI/UX for accessibility and SEO by implementing semantic HTML and ARIA roles, resulting in a **40%** improvement in Lighthouse scores, increased search visibility by **35%**, and longer user engagement.

### Co-Chair & Co-Founder

Waterloo, ON

FormulaTech Hacks

Feb 2025 – Present

- Organizing a motorsport-themed hackathon, driving participation from post-secondary students and managing a cross-functional team of **30+** members, overseeing development, design, logistics, marketing, and sponsorships.
- Leading brand development, digital presence, and strategic partnerships with tech sponsors to enable hardware, software, and CAD-based innovation tracks.

## Projects

### AI Voice Assistant — Python, Deepseek LLM, Google Web Speech API, Pyttsx3

[🔗/ai-voice-assistant](#)

- Developed a conversational **AI system** by integrating **speech recognition** and **text-to-speech** libraries with **local LLM inference**, resulting in a responsive voice assistant capable of understanding without cloud dependencies.
- Implemented session persistence by creating an automated conversation archiving system that generates semantically relevant titles via **prompt engineering**, storing interactions in both .JSON and .TXT formats for future analysis and improvement.
- Engineered a command recognition framework enabling the AI to interpret and execute system-level tasks from natural language prompts, extending functionality beyond conversational interaction.

### Movies Search Application — React, Vite, Node.js, React Router, TMDb API

[🔗/movies-search](#)

- Developed a responsive single-page application using **React**, **Vite**, **Node.js**, and **React Router DOM**, implementing client-side routing and dynamic rendering of TMDb API data.
- Utilized **React Context API** and **custom hooks** to manage application state for user-selected favorites, with **localStorage integration** for persistent user experience.
- Integrated **asynchronous data fetching** with **async/await** and **fetch API** to retrieve movie data from The Movie Database (TMDb), implementing error handling and loading states with React **useState** and **useEffect** hooks.

### Portfolio Website — HTML, CSS, JavaScript, jQuery, Three.js

[🔗/portfolio-website](#)

- Developed a fully responsive website using **HTML**, **CSS**, **JavaScript**, and **jQuery**, implementing reusable UI components with hover effects, dynamic animations, and DOM-based interactivity.
- Integrated **Three.js** to render interactive 3D models exported from SolidWorks, allowing orbit, zoom, and pan manipulation and detailed exploration of the mechanical designs.
- Optimized load times, site security, and performance, achieving a **99%** Lighthouse performance score, **85%** accessibility rating, and **0.6 second** speed index.

## Skills

**Languages:** Python, Java, C++, JavaScript, HTML/CSS, SQL, MATLAB

**Tools/Frameworks:** React, Node.js, Next.js, Three.js, TailwindCSS, Vite, Figma, MySQL, Git, Jira