Tawsif Mayaz

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Technical Skills

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

Frameworks: React, React Native, Next.js, Node, Express, Vue, Angular, Flask, OpenCV, Tailwind, D3.js, Three.js

Tools: Unity, Azure Kinect SDK, PostgreSQL, MySQL, SQLite, Supabase, GraphQL, Git, Jira

Experience

Cineplex Digital Media | *Software Developer Intern* May 2025 – Aug 2025

- Enabled precise customer interaction tracking, engineering a **Unity C# system with Azure Kinect sensors** that recreated retail spaces in real time and monitored movement patterns.
- Cut product placement setup time from **hours to seconds** by developing an interactive 3D configuration platform with **Unity UI and SQLite CRUD pipelines**, enabling rapid recreation of product layouts.
- Reduced layout inconsistencies by **25+ manual actions per design** with a ray-casting and grid-based placement system, improving reliability of store layouts.
- Facilitated analysis of **10,000+ events per session** by building a full-stack analytics pipeline with a **React frontend and Flask REST API** to process and visualize customer data.
- Saved **70%** of manual analysis effort, implementing automated parsing pipelines in **Python** and generating interactive 2D/3D maps with **D3.js and Three.js**.

Electrium Mobility | *Full-stack Developer* Sep 2024 – Apr 2025

- Led the development of a scalable **Next.js and Supabase e-commerce platform** for electric vehicle rentals, covering browsing, checkout, and payment workflows end-to-end to support customer onboarding.
- Architected authentication and authorization flows with **Supabase Auth**, including sign-up, login, and password reset functionality to ensure data protection.
- Designed a responsive interface with **Tailwind CSS**, improving accessibility compliance and guaranteeing consistent performance across desktop and mobile devices.
- Streamlined collaboration by coordinating code reviews, issue tracking, and branching workflows with **GitHub**, enabling faster iteration cycles.

Mhapy | *Full-stack Development Intern* Jan 2024 – Aug 2024

- Drove a **30% increase in user engagement** and improved platform usability by integrating core functionalities for a patient therapist matching website using **React and Tailwind**.
- Boosted therapist recommendation accuracy by **25%** by developing personalized matching flows through APIs built with **NestJS and Express**, reducing mismatches between patients and therapists.
- Managed relational data for **1,000+ active users and therapists** by optimizing **PostgreSQL databases**, improving query performance and reliability.
- Created prototypes in **Figma**, providing clarity to design discussions and accelerating accessibility improvements across user flows.
- Collaborated in an **Agile team of 7**, delivering **10+ features** through regular standups, which strengthened platform stability, and performance.

Projects

BetterKaraoke Aug 2025

- Built a mobile karaoke app with **React Native and Expo**, supporting real-time multiplayer, lyric synchronization, scoring, and matchmaking.
- Implemented audio capture and mixing using **Expo AV**, improving synchronization precision and reducing latency in playback.

TerraCustos Jan 2025

- Developed a real-time disaster reporting application with **React and Mapbox**, featuring interactive visualizations and live event data rendering.
- Integrated **Supabase authentication** and external GraphQL APIs, enabling real-time disaster data synchronization.

Dynamic World Generation – WEC Winner Jul 2024

- Won 1st place out of 124 participants at the Waterloo Engineering Competition by developing a **Python world generator** that used BFS and Dijkstra algorithms, visualized with Turtle graphics.

Education

University of Waterloo | *BASc. Computer Engineering* Sept 2023 – Present

Relevant Courses: Data Structures and Algorithms, Digital Computers, Systems Programming, Discrete Mathematics