Ahmed Muni

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SUMMARY

Software engineer specializing in building scalable, real-world applications, such as CrewCode (real-time coding platform) and In-Gredient (mobile allergen detection app). Proficient in React, React Native, and cloud deployments with a focus on optimizing user experience and performance.

PROJECT EXPERIENCE

- Architected and developed CrewCode, a peer-to-peer collaborative coding platform enabling users to create rooms and collaborate in real-time on coding files.
- Optimized real-time communication by **reducing latency up to 80%** through deploying a secure WebSocket-based signaling server on Render, ensuring private peer-to-peer connections.
- Utilized **React**, **Chakra UI**, **Vite**, and the **Piston RESTful API** to provide language support for **80+ languages** and streamlined the user experience through a responsive design.
- Resolved concurrent update merging issue by integrating Yjs CRDT resulting in conflict-free concurrent updates across multiple users in a shared Monaco Editor.

Allergy Alert App | JavaScript, React Native

- Designed and developed In-Gredient, a mobile application that allows users to scan branded food products to find allergens and ingredients they wish to avoid.
- Integrated OpenFoodFacts REST API to retrieve ingredient information from scanned barcodes, **successfully scanning over 125 products with 96% accuracy** during development and testing.
- Utilized Expo's Camera module to capture product barcodes enabling a seamless experience with Android and iOS.

WORK EXPERIENCE

Software Engineer (co-op)

May 2019 - Aug 2019

s2e Technologies | Waterloo, ON

- Engineered a novel autonomous vehicle prototype for investor demonstrations resulting in \$1M in project funding.
- Developed the prototype by utilizing Python, OpenCV, Linux, and ROS completing the project 2 weeks ahead
 of schedule.
- Led the documentation process within an interdisciplinary team of 5 for the project resulting in a **50+ page document** outlining all aspects of the project from technical specifications to environmental impacts.

SKILLS

- Languages: JavaScript, TypeScript, HTML, CSS, Python, C/C++, Dart
- Frameworks/Tools: React, React Native, Expo, Node, Express, Redux, MongoDB, ¡Query, Flutter, Bootstrap
- Dev Tools: Git, Vercel, Render, AWS, Docker, Figma, Agile/Scrum, VSCode, Visual Studio
- Testing: Jest, pytest

EDUCATION

- Bachelor of Engineering in Systems and Computing (B.Eng) | University of Guelph
- Meta Front-End Developer Professional Certificate | Coursera
- Complete Web Development Bootcamp | London App Brewery
- Machine Learning AI & Python Certificate | SuperDataScienceTeam