Karanveer Panesar

karanveerpanesar04@gmail.com - (437) 235-2769 - linkedin.com/in/kpanesar88/ - github.com/kpanesar88

EDUCATION

York University - Lassonde School of Engineering **April, 2027**
B.eng, Computer Engineering *Toronto, ON*

RELEVANT COURSES & SKILLS

Courses: AOOP, Computer Organization, Communication Networks, Fundamentals of Data Structure, Intro to Embedded Systems

Skills: Git, Arduino, Sensor Integration, React-Native, Flask, Node.js, Python, Html, Css, C++, Js, Ts

PROJECTS

BrainUp | (*Python, Html, Css, Js, Node, Selenium, Flask, ReactJs)*
- Developed BrainUp, a data integration platform that extracts Instagram reel and post data for AI analysis, enabling more accurate modeling of user interests and behaviors.
- Implemented personalized recommendation algorithms, increasing user engagement on Kijiji by suggesting relevant classes and activities based on user data.
- Built the frontend with **ReactJS** and the backend using **Flask**, integrating machine learning techniques like **HDBSCAN** for clustering and **Mistral** for enhanced model predictions.
- Addressed technical challenges such as **Instagram API rate limits** and learned new frameworks to optimize performance, all while fostering effective collaboration within the team.

VoiceMedic | (*React Native, Node.js, Expo, Js, Ts, OpenAI)*
- Developed VoiceMedic, an AI-powered mobile app that provides real-time first-aid instructions through voice recognition, offering immediate assistance during emergencies.
- Integrated **OpenAI** and custom-trained models to process voice input, delivering context-specific guidance for actions like CPR, wound treatment, and choking.
- Focused on minimizing steps compared to existing voice assistants, such as **Siri**, enabling users to get critical help in fewer clicks.
- Overcame technical hurdles with app compatibility, resolving conflicts between Expo and native modules, and integrating advanced APIs for speech recognition and AI-driven responses.

Eye Tracker Productivity Extension | (*Python, Html, Css, Js, Flask)*
- Created a browser extension that uses **eye-tracking technology** to monitor user focus, providing real-time feedback to improve productivity and reduce distractions.
- Designed a clean, intuitive interface using **HTML**, **CSS**, and **JS**, ensuring seamless user interaction while maintaining performance.
- Overcame integration challenges related to accurate eye-tracking data interpretation, improving both the extension's technical performance and overall user experience.
- Delivered actionable insights through data visualization, helping users track their attention span and work habits.

EXTRACURRICULARS

1st Place AI Challenge (Brain Up) @ Hack the Hill 2 | University of Ottawa **September, 2024**

Volunteer @ Hack the North | University of Waterloo **September, 2024**