Goshanraj Govindaraj

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Education

Bachelor of Applied Science, Honours Computer Science (Expected) Apr. 2028
McMaster University, Hamilton ON; GPA (3.9/4)

Experience

Open-Source Software Developer Dec. 2024 – Present
Reality AI Lab, Remote

- Developed and maintained **open-source AI** tools leveraging **React**, **Node.js**, and **Python**, implementing advanced features that enhanced user interaction by enabling real-time data processing for **2,000+** active users on educational platforms
- Enhanced overall system performance through managing scalable data processes with **FirestoreDB** and **Redis**; consistently achieved optimal query response times, catering to **1,000+** user interactions each day with robust and reliable performance
- Powering **AI-driven solutions** projected to effectively serve **10,000+ users**, for future growth across educational platforms

Community and Code Team Member Sep. 2024 – Present
Google Developer Student Clubs, Hamilton ON

- Organized and successfully led over **10** community and coding events, including engaging tech talks and hands-on workshops, attracting an average of over **50** participants per event, and contributing to a **30%** increase in community engagement
- Assisted in developing and actively maintaining structured code repositories for event-related projects, ensuring high code quality and facilitating seamless collaboration among a team of **15+** contributors through version control systems like **Git**
- Played a significant leadership role in various community events such as Resume Roasts, attended by **75+** participants, engaging OpenCV workshops with **150** attendees, and the "Behind the Scenes of ChatGPT" workshop, with **100+** attendees

Projects

Calorie and Macro-nutrient Tracker | *JavaScript, C++ Node.js, MongoDB, React*

- Currently developing a full-stack calorie and macro-nutrient tracker app, enabling users to log meals and track daily intake with real-time calorie data from a database of **10,000+** food items, featuring secure user authentication with **Auth.js**
- Implementing a **React-based** interactive UI, a **Node.js** and **C++** backend for efficient data processing, and **MongoDB** for scalable and reliable storage ensuring seamless performance and extensive availability of comprehensive food data

Healthcare SMS Bot | *Flask, Python*

- Built a **short message service** healthcare assistant using **Twilio**, **OpenAI** and a **Flask** backend, delivering critical and personalized health tips to individuals in remote areas with limited internet, significantly improving health awareness by **50%**
- Integrated a **geolocation API** to identify user locations and deliver precise nearby hospital recommendations with a verified **99%** accuracy when the trained model detects a potential medical emergency based on a phone number analysis of the user
- Trained an **OpenAI model** to analyze user queries, delivering healthcare advice with **95%** accuracy across medical topics

House Price Predictor | *Python*

- Built a **machine learning** model to predict Toronto house prices using features like house size, total bedrooms, and location helping homeowners assess value during the housing crisis; achieved a **mean absolute error** of **±5%** with high accuracy
- Preprocessed a dataset of **1,000+ records** using **pandas** for data cleaning, normalization, and efficient feature encoding
- Utilized **NumPy** for efficient numerical computations, optimizing complex preprocessing workflows and reducing overall computation time by **20%**, and used **scikit-learn** to implement, fine-tune, and evaluate the **Random Forest model**

Technical Skills

Languages: TypeScript, Python, JavaScript, C, HTML5, CSS3, SQL, PHP, C++
Frameworks: Flask, Node.js, React, TailwindCSS, Bootstrap, Auth.js
Developer Tools: Visual Studio Code, Git, GitHub, MongoDB
Libraries: pandas, NumPy, Matplotlib, JSON, scikit-learn