Harsh Upadhyay

437-986-2285 upadhh1@mcmaster.ca Linkedin Github Personal Portfolio

Education

McMaster University

Honours Computer Science Co-op (B.A.Sc.) *Hamilton, ON*

- Presidents entrance scholarship valued at $5000 for incoming students with above an 96% average in high school

Relevant Coursework: Applied Cryptography, Fundamentals of Machine Learning , Principles of Programming Languages, Operating Systems, Concurrent Systems, Data Structures and Algorithms, Databases.

Technical Skills

Languages: Python, Javascript, C, C++, Java, HTML/CSS, SQL, Haskell, Elm, MongoDB
Developer Tools: VS Code, Eclipse, Replit, GitHub, Git, Docker, Netlify, Cloudflare.
Frameworks: React.js, Node.js, Express.js, Tailwind CSS, Email.js, Django, Flask, DeepFace, OpenAI API, Tensor Flow

Experience

Sciencious - United Arab Emirates **April 2022 – August 2022**

Website Developer *Dubai, UAE*

- Led the design and deployment of the firms website, integrating robust **backend** solutions with sleek **frontend** design.
- Engineered a responsive user interface employing **HTML**, **CSS**, and **JavaScript**, leveraging frameworks like Bootstrap to ensure cross-platform compatibility and fluid interaction.
- Applied agile methods, enhancing features & performance while adapting to latest web tech for optimal user engagement.

Comet **January 2022 – April 2022**

Software Tester Intern *Dubai, UAE*

- Conducted in-depth **UI/UX** analyses during software testing, meticulously documenting bugs, results, and concerns, facilitating iterative enhancements which resulted in a **100%** improvement in the overall performance of the web pages.
- Engaged in structured user testing sessions as per Head Developer's directives, providing critical feedback to augment product development and refine iterative cycles.
- Collaborated cross-departmentally with engineers, devising robust test plans and strategic approaches for effective product development.

Projects

Personal Portfolio Website | *HTML, CSS, Javascript, NextJS, Swiper API, EmailJS* **February 2024**

- Developed a personalized portfolio website using **NEXT.js**, showcasing expertise, projects, and accomplishments.
- Created an engaging and responsive UI with **HTML**, **Tailwind CSS**, & **Framer Motion** to enhance user experience.
- Implemented **JavaScript** for interactive features and dynamic content, boosting user engagement
- Integrated **EmailJS** for seamless communication and efficient handling of inquiries.
- Employed industry-standard best practices to **optimize performance** and ensure **cross-browser compatibility**.

ActiveTrack | *Python, Jupyter Notebook* **December 2023**

- Developed **Python** scripts for robust data handling, visualization, and machine learning model creation using accelerometer and gyroscope data, enabling precise classification of barbell exercises, and counting repetition.
- Utilized outlier detection techniques like **Chauvenet's Criterion**, advanced feature engineering, and predictive modeling with hyperparameter tuning, achieving a **high classification accuracy of 98.9**.
- Engineered **LowPassFilter-based** repetition counting function, optimizing settings for accurate repetition identification, showcasing technical proficiency in signal processing and algorithm development for fitness data analysis.

EchoSphere | *Python, speech recognition, BeautifulSoup* **December 2023**

- Designed a **Python**-based voice assistant utilizing the **Speech Recognition** module and **multiple APIs** for automation, web search, system control, and utilities, enhancing interactive user experiences.
- Implemented **voice-controlled automation** for tasks like managing YouTube, applications, and WhatsApp, alongside retrieving information from sources such as Google, YouTube, and Wikipedia.

Crypto Price Forecasting | *Python, TensorFlow, Keras, LSTM, Yahoo Finance API, MWClient* **August 2023**

- Developed a predictive model for Cryptocurrency price forecasting by combining historical market data with **sentiment analysis** from Wikipedia edits, leveraging **LSTM neural networks** for time-series prediction.
- Utilized Python libraries like **TensorFlow**, **Hugging Face Transformers**, and **Yahoo Finance API** to gather, preprocess, and analyze data, achieving improved accuracy in price predictions.