Haresh Goyal

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Education

University of Waterloo **Sep. 2024 - Present**
Candidate for Bachelor of Applied Science, Computer Engineering *Waterloo, Ontario*

Technical Skills

Languages: Python, Java, TypeScript, HTML, CSS, Javascript, C++, C
Developer Tools: GitHub, Git, VS Code, STM32CubeIDE, Altium, Figma, Adobe Creative Cloud, Linux
Technologies: NextJS, VueJS, TensorFlowJs, ExpressJs, FastAPI, NodeJS, ReactJS, MongoDB, AWS Lambda, Vite

Experience

The Learning Enrichment Foundation **June 2024 – August 2024**
Technical Agent *Toronto, Ontario*

- Worked for a non-profit, where I designed and delivered comprehensive lectures for immigrant clients (class sizes of **up to 50**), leveraging platforms like **LinkedIn** and other online tools to teach digital literacy and career-building skills.
- Developed and deployed front-end features using **HTML, CSS, and JavaScript**, implementing responsive and user-friendly designs to improve accessibility for nonprofit services, leading to a **200% increase in website traffic**.
- Architected a scalable system for the *"Windfall Closet"* initiative, incorporating inventory tracking and client management solutions, enabling partnerships with brands and providing free clothing to **125+ clients**.

Khanscapes **Fall 2024**
Lead Software Developer *Vaughan, Ontario*

- **Redesigned and deployed a scalable full-stack website** for 'Khanscapes,' leveraging Next.js, React.js, Shadcn/ui, Tailwind CSS, and TypeScript to deliver a modern, responsive, and interactive user experience.
- **Implemented agile methodologies** to streamline the development lifecycle, ensuring seamless website updates through regular maintenance cycles and feature enhancements.
- **Increased client acquisition by 3x** and achieved **significant conversion rate improvements** by enhancing website functionality, optimizing user journeys, and driving higher engagement through targeted design refinements.

UW Midnight Sun Solar Car Team **Fall 2024**
Software Team Member *Waterloo, Ontario*

- Contribute to firmware development in C for an STM32 microcontroller running FreeRTOS.
- Developing the **CRC32** (Cyclic Redundancy Check) library for newly implemented STM32L4 microcontrollers.

Projects

NeuroBlocks: 'Scratch' for BCI Development | *OpenBCI, Blockly, Brainflow API, NextJS, React, Flask* **January 2025**

- Created an intuitive **block-based coding platform** inspired by Scratch, designed to simplify **Brain-Computer Interface (BCI)** application development for users with minimal technical expertise.
- Implemented a **drag-and-drop interface** using Google's **Blockly API** to allow visual assembly of BCI workflows and integrated **BrainFlow API** for seamless real-time EEG data processing and interaction.
- Secured backing from a **California-based venture capital investor** specializing in BCI innovation, validating the platform's potential to revolutionize accessibility in neuroscience technology.

UpTick: An Investor's Best Friend | *Vue.JS, FastAPI, Express.JS, Node.JS, PostgreSQL, RESTful* **January 2025**

- Developed a comprehensive stock market analysis platform providing real-time data using the **yfinance API**, web scraping through **BeautifulSoup**, and news aggregation via the **NewsAPI** and **PRAW (Reddit) APIs**.
- Integrated sentiment analysis using fine-tuned **NLP models** (NLTK, spaCy, Transformers) from HuggingFace, enabling data-driven market insights, further incorporating logistic and linear regression models for stock trend predictions.

Mesh.io: LLM for Networking | *Next.JS, React, TypeScript, Flask, Plotly, MongoDB, Cohere* **January 2025**

- Developed a real-time networking platform, scraping data from resumes, securely managing with Auth0 authentication, and leveraging dynamic node visualizations (Plotly), to connect individuals based on shared skill sets.

Flip or Drip: 'Tinder' for Clothes | *Vue.JS, Flask, Python, TensorFlow.JS, OpenAI* **August 2024**

- Designed an app using OpenAI and Flask APIs to provide tailored clothing recommendations, using machine learning to integrate user preferences and TensorFlow-based hand tracking for interactive clothing visualization.

Certifications

Supervised Machine Learning: Regression and Classification **January 2025**
DeepLearning.AI — *Credential ID: 4CE0DG334N8Y*