

HARESH GOYAL

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Education

University of Waterloo

Sep. 2024 - Present

Candidate for Bachelor of Applied Science, Computer Engineering

Waterloo, Ontario

- Relevant Coursework: Fundamentals of Programming in C++, Project Studio – STM32 Firmware

Technical Skills

Languages: Python, Java, TypeScript, HTML, CSS, Javascript, C++, C

Developer Tools: Git, Linux, GitHub, Git, VS Code, STM32CubeIDE, Altium, Figma, Adobe Creative Cloud

Technologies: NextJS, VueJS, TensorFlowJs, ExpressJs, FastAPI, NodeJS, ReactJS, MongoDB, AWS Lambda, Vite

Experience

The Learning Enrichment Foundation

June 2024 – August 2024

Technical Helpdesk Agent

Toronto, Ontario

- Curated and instructed lectures to immigrant clients (class sizes **up to 50**), teaching online services (e.g. LinkedIn).
- Integrated front-end features (HTML, CSS, Javascript), leading to **200% increase** in website traffic.
- Spearheaded the "windfall closet" initiative, connecting with brands to offer **125+ clients** free clothing.

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

UpTick: All-In-One Market Analysis | *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.
- Implemented a PostgreSQL database for efficient data storage and utilized AWS Lambda for serverless processing.

Freelance Web Developer | *TypeScript, Shadcn/ui, React.js, Next.js, Vercel, TailwindCSS*

Fall 2024

- Boosted online presence and website traffic for 'Khanscapes' by 300% using agile methodology.

Flip or Drip | *Vue.js, Flask, Python, TensorFlow.js*

August 2024

- Built a "Tinder for clothes" app using OpenAI and Flask APIs to provide clothing recommendations.
- Utilized TensorFlow for real-time hand tracking to test clothing options.

Google Fall Challenge | *Web-Dev, Figma, Product Management*

January 2024

- Worked alongside Google Engineers to discover solutions to increase ad revenue.
- Pitched two solutions: (i) **Google Ads +** - a built-in feedback system to provide clients with quality scores with a revised landing page generated by Gemini AI (ii) **Google Lite** - an extension to provide quick, 'snippet'-like search results.

Soil Moisture/Temperature Sensor | *C, STM32, STM32CubeIDE, I2C, UART*

October 2024

- Developed C firmware to interact with environmental sensors via I2C and displayed data in real-time.
- Employed USART to transmit data across two STM32 boards.

Certifications

Supervised Machine Learning: Regression and Classification

January 2025

DeepLearning.AI — Credential ID: 4CE0DG334N8Y

Awards/Recognitions

- Graduating Class of 2024 Valedictorian
- Northview Heights S.S. Administration Scholarship
 - Graduating student who displays leadership, academic excellence, and contribution to the school.
- Stanley Francis Foundation Scholarship