

Uday Singh Kanwar

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[Person Website](#)

[Github](#)

Education

McMaster University

Expected Graduation, April 2027

Bachelor of Engineering (Software Engineering)- 2nd Year

Hamilton, Ontario

- GPA: 3.94/4.00- Dean's Honor List, **Faculty of Eng Award of Excellence Scholarship**

Related Coursework

Sep 2024-Present

- Linear Algebra, Intro to Object Oriented Programming (JavaScript), Development Basics (Linux, CI, Git Version Control, CI Pipeline, C), Digital Logic (Verilog, FPGA), Discrete Math, Statistics, Design Projects (Python, CAD)

Meta Database Engineer Professional Certificate

August 2024- Present

Database management, Tabular records, Database Administration, SQL and Python syntax, MySQL

Online

Experience

Full-Stack Developer

September 2024- Present

Human Endeavour

Remote, part-time

- Currently managing a MySQL database with sensor data and performing data analytics.
- Optimized database performance by designing and managing efficient indexing structures for faster query retrieval.
- Responsible for data visualization and developing a front end.

Embedded Software Engineer Intern

June, 2024- August, 2024

Human Endeavour

Vaughan, Ont

- Designed and implemented a fall detection algorithm in C++. An ESP32 microcontroller and accelerometer were used to monitor fall events and trigger automated email alerts through the Gmail SMTP server.
- Helped develop a trilateration algorithm for an advanced indoor positioning system leveraging Ultra-Wideband (UWB) technology to achieve high-precision location tracking .
- Collaborated on setting up a scalable cloud database using phpMyAdmin.
- Integrated various home automation sensors with custom PCBs integrated.
- Debugged Hardware and Software for over 100 custom PCBs while setting up wireless communication between the sensors and a MySQL Database.

Extra-Curriculars and Projects

EcoCoin @Terrahacks | JavaScript, React, Firebase, CSS, HTML

Aug 2024

- Developed EcoCoin, an eco-friendly cryptocurrency, and EcoHub, a platform to track and reward environmental contributions using React, Firebase, Mapbox, and Google Cloud.

Memories @Makeuoft | Python, OpenCV, C++, Arduino IDE, Taipy

Feb 2024

- Developed a computer vision program in Python for people with dementia using OpenCV for live facial recognition, integrated into a website with Taipy, and connected to an Arduino board using pyserial and C++.

Mac Sumo Bots | C++, Arduino IDE, CAD, Sensors

Sep 2023 – Dec 2023

- Competed in the McMaster Sumo Bots competition, placing top 5, by integrating ultrasonic sensors, IR sensors, DC motors, and Arduino Nano, and programming the robot in C++ to autonomously navigate the ring and compete against other bots.

Library Management Portal | C++

Jan 2023-March 2023

- Developed an application using C++ enabling admin login to add books, manage bookings, and users.

Teacher Announcement Program | JavaScript, HTML, CSS

Sep 2021- Dec 2021

- Developed a fully responsive website for teachers to post announcements that students can browse. Uses a browser's local storage to store the posted announcements and includes a comprehensive search algorithm

Technical Skills

Languages: Python, JavaScript, C++, C, HTML, CSS, Arduino, C, MS Power Apps, TensorFlow, Scikit-Learn

Frameworks and More: AWS, Cloud Computing, OpenCV, Taipy, Arduino IDE,, MatLab, Git, GitHub, Quanser Labs, AutoDesk Inventor(CAD), PCB Design, Ansys Granta, AWS IoT