

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: 3.9/4.0- Dean's Honor List,
- Faculty of Eng Award of Excellence Scholarship- \$4000

Related Coursework

Sep 2024-Present

- Linear Algebra, OOP (Java), Development Basics (Linux, Git Version Control, CI Pipeline, C), Digital Logic (Verilog, FPGA, Quartus Prime), Discrete Math, Statistics, Design Projects (Python, CAD), Computer Architecture, Data Structures, Algorithms

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

- Managing MySQL databases that handle real-time sensor data, optimizing query performance by designing indexing structures and implementing efficient data retrieval methods.
- Developing a React-based front-end for visualizing sensor analytics, leveraging Tableau for creating dynamic and real-time dashboards for data interpretation.

Embedded Software Engineer Intern

June, 2024- August, 2024

Human Endeavour

Vaughan, Ont

- Developed a C++ fall detection algorithm using an ESP32 microcontroller and accelerometer to monitor fall events, triggering automated email alerts via Gmail SMTP.
- Implemented a trilateration algorithm with Ultra-Wideband technology using AT Commands and C++.
- Collaborated on setting up a scalable cloud database using phpMyAdmin.
- Debugged 100+ ESP8266 PCBs and configured Wi-Fi communication between the chips and MySQL database.

Extra-Curriculars and Projects

Google Developers Student Club | Conference Team: Co-Lead

Sep 2024 – present

- Leading efforts to organize technical talks, workshops, and hackathons at McMaster.

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, Tensorflow (ML)

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 creating a C++ algorithm to autonomously navigate the ring.

Library Management Program | C++

Jan 2023- March 2023

- Developed a C++ application with a secure login system, featuring a search algorithm, book and user management, and a library catalog creation.

Teacher Announcement Program | JavaScript, HTML, CSS

Sep 2021- Dec 2021

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

Skills

Languages: Python, Java, JavaScript, C++, C, HTML, CSS, Arduino, C, MS Power Apps, React

Technologies: AWS, Firebase, Flask, phpMyAdmin, TensorFlow, mySQL, OpenCV, Taipy, Arduino IDE, MatLab, Git, GitHub, AutoDesk Inventor