Uday Singh Kanwar

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Education

McMaster University	Expected Graduation, April 2027
Bachelor of Engineering (Software Engineering)	*Hamilton, Ontario*

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

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 that receives data from sensors over the cloud, then performing data analytics. Using Tableau to do data visualization and integrate it into a web application.

Embedded Software Engineer Intern	June, 2024- August, 2024
Human Endeavour	*Vaughan, Ont*

- Designed and implemented a fall detection algorithm in C++ on the Arduino IDE. Utilized an ESP32 microcontroller and accelerometer 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. Tested and Debugged Hardware and Software for over 20+ boards. Helped set up wireless communication from the sensors to the MySQL Database.

Exoerience

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.

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 bot in C++ to autonomously navigate the ring and compete against other bots.

Projects

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 comprehensive search algorithm

Sterilization using Q-Arm | *Python*	Sep 2023- Dec 2023

- Worked in a team to develop a program using Python to automate an Robotic Q-Arm to pick up containers and drop them in correct autoclaves for sterilization

Technical Skills

Languages: Python, JavaScript, C++, HTML, CSS, Arduino, C, MS Power Apps, TensorFlow, Scikit-Learn
Frameworks and More:AWS, Cloud Computing, OpenCV, Taipy, Arduino IDE,, MatLab, GitHub, Quanser Labs, AutoDesk Inventor(CAD), PCB Design, Ansys Granta, AWS IoT