Manush Patel

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EDUCATION

McMaster University — Hamilton, ON
Bachelors of Engineering — *September 2024 - Present*

- Recipient of the Engineering Award of Excellence, awarded for outstanding academic performance within the top 10% of the engineering faculty

EXPERIENCE

Firmware Developer — Hamilton, ON
Formula E-Electric — *September 2024- Present*

- Developed an infra-tool to calculate CAN traffic on 5 micro-controllers and reduced data loss by 25%
- Implemented a filter for CAN to receive messages using priority-based arbitration allowing low-priority messages to be suppressed when bus load is high

Commission Sales Associate — Brampton, ON
Tiptop Tailors — *June 2022 - June 2024*

- Provided personalized service in selecting and fitting high-quality men's suits, contributing to a 20% increase in customer satisfaction scores and a 15% rise in repeat business
- Measured clients for tailored suits and offered expert assistance in planning outfits for weddings and other special events

EXTRACURRICULAR INVOLVEMENT

AngelHacks Winner | *Raspberry Pi, C/C++*

- Achieved 1st place and won $500 in funding to organize school's first hackathon, providing students with a platform to explore tech innovation
- Programmed a series of interactive minigames on a Raspberry Pi Pico, demonstrating skills in hardware and game design
- Delegated tasks based on team members' strengths, ensuring efficient workflow and high-quality outcomes while fostering a collaborative and motivating environment

Hackathon Organizer | *Event Planning, Leadership*

- Organized and led the first-ever hackathon in the school district, managing recruitment, logistics, and fundraising to make the event possible
- Attracted over 200 participants, collaborating with other clubs for advertising, which resulted in a successful event and a 10% increase in tech club enrollment

PROJECTS

Sudoku Solver | *C, Git*

- Built a Sudoku solver with a backtracking algorithm, optimal for time complexity
- Applied dynamic memory allocation, gaining hands-on experience with efficient memory management
- Optimized data structures and pointer manipulation, improving skills in code efficiency and performance tuning

Plant Watering System | *Arduino, C/C++*

- Developed an automated plant watering system using Arduino and a soil moisture sensor, expanding knowledge in IoT and sensor integration
- Implemented email notifications for real-time alerts, building skills in monitoring and communication protocols
- Logged soil moisture data to a spreadsheet for analysis, gaining experience in data collection and documentation for system optimization

TECHNICAL SKILLS

Languages | C/C++, Java, Python, LaTeX, Swift

Developer Tools | Git, VS Code, Visual Studio, PyCharm, Jupyter Notebook

Libraries | Pandas, NumPy, Matplotlib, Yfinance, Jinja