Marisa Patel

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EDUCATION

McMaster University   Hamilton, Ontario
Bachelor of Electrical Engineering   *Sept. 2021 – May 2026 (Expected)*
- **Relevant Coursework**: Electronic Devices and Circuits, Microprocessor Systems, Logic Design, Electromagnetics, Signals and Systems, Principles of Programming

EXPERIENCE

Tutor and Data Entry Operator   Oct. 2018 – Sept. 2021
Kumon   *Hamilton, Ontario*
- Tutored preschool-age to Grade 12 students to help strengthen their math and reading skills
- Created student reports and provided feedback
- Worked with data entering and organizing using Microsoft Excel

PROJECTS

Spatial 360 Mapping | *C/C++, I2C/UART, MATLAB, Microcontroller*   Apr. 2023
- Developed a data acquisition device that used distance measurements for indoor mapping
- Employed C/C++ programming to integrate a microcontroller with a Time-of-Flight (TOF) sensor via I2C/UART communication
- Used MATLAB to create visual representations of data

Kitchen Cutting Device | *Autodesk Inventor, 3D Printing, Woodworking*   Apr. 2022
- Designed a kitchen cutting device using Autodesk Inventor for a case study to aid a client diagnosed with Ehlers-Danlos syndrome
- Used 3D printing and woodworking to build and assemble the device

Recycling Sorting System | *Python, Autodesk Inventor, 3D Printing*   Feb. 2022
- Created a system that used Python and a physical device that categorized waste and recyclables from a hopper into designated bins
- Used Autodesk Inventor to design a mechanism that facilitates the movement of the hopper to dispose recyclables
- 3D printed and assembled the mechanism

Remote Sensing Sterilization System | *Python, Autodesk Inventor, Quanser Interactive Labs, Raspberry Pi*   Dec. 2021
- Developed a Python code to be used in a Quanser Interactive Labs simulated environment interfaced with a robotic arm that picks up, transfers, and drops off various containers holding surgical tools
- Used a Raspberry Pi to demonstrate the code and move the containers in the simulated environment

LEADERSHIP

McMaster Google Developer Student Club   Sept. 2023 – Present
Incubator Team Member
- Assisted teams with working towards the Google Solutions Challenge 2024
- Organized and hosted technical and non-technical workshops and events
- Enabled hands-on learning

McMaster IEEE   Sept. 2023 – Present
Computer Chapter Member
- Worked on programming projects using Arduinos, sensors, keypads, LCDs, and more
- Attended workshops to build systems and devices

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, HTML, CSS, MATLAB/Simulink, R, Verilog, Assembly
Developer Tools: GitHub, Visual Studio Code, Eclipse, Keil uVision, Quartus II
CAD: Autodesk Inventor, AutoCAD, PSpice, LTSpice