

# GUNDEEP SINGH SIDHU

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🌐 <https://gdsidhu.github.io/website>

## Profile

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A highly motivated first year engineering(electrical) student at University of Manitoba with excellent problem solving skills and eagerness to acquire knowledge while working in a team.

## Education

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**B.Sc. in Engineering (Electrical)**

*University of Manitoba 1st Year*

**Sep. 2024 – Present**

*Winnipeg, Manitoba*

## Relevant Skills

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- C/C++ Programming
- PCB Soldering
- Breadboard Prototyping
- Basic Electronics
- Arduino

## Projects

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### 4Bit-Adder

*Essentially a Calculator*

- Used a few gate chips(particularly OR, AND and XOR gates) on a breadboard, first to create a full-adder circuit and finally connecting 4 of them in series to create 4Bit-Adder.
- Used five LEDs and Seven Segment Displays to display output in binary as well as decimal system.
- Seven Segment Display were lit dynamically with help of Arduino which converted the binary output into decimal.
- Soldered the Leds and the displays on a PCB.
- Used DIP switches as two 4Bit inputs for the Adder.

### Led Dimmer

*Using PWM Signal*

- Used Arduino to generate a PWM signal of a certain frequency and measure analog voltage across the potentiometer.
- Adjusted the duty cycle of the signal to dim the LED by using Potentiometer as a voltage divider.

### Joy-Stick Controlled Servo

*Using Arduino*

- Used the fact that a joystick is just two different potentiometers working as voltage dividers to dictate position of a servo motor.
- Learned how to work with libraries in C/C++.
- Used Serial Monitor to print current position(in degrees) of the servo motor.

## Personal Portfolio

*Built a Website from scratch*

- Used HTML, CSS and Javascript to build a cool website.
- Used Github for version control and hosting the website.
- The website showcases my projects, including an about and contact me section, using captivating animations.
- Website is responsive and adapts itself according to the device.

## Interest/Hobbies

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- Crafting(mainly with cardboard).
- Badminton.
- Occasional Running.
- Watching Youtube Videos.