

Yacine Ouhrouche

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[in yacineouhrouche](#)

[YacineGitHub](#)

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Competency

Skill – PCB Design – RF Circuit **Software** – Altium, KiCad, AutoCAD, SolidWorks, Jira
– Computer architecture – HDL **Programming** – Verilog, VHDL, C++, SQL, VBA, JavaScript
– Logic Circuit Design – CAD Design **Testing** – ANSYS, MATLAB, Vivado, LTspice

Experience

Midnight Sun solar team, Electrical team member

Waterloo, On
Aug 2024 – Today

- Collaborate with a team to create a PCB of a current sense to measure current and voltage of the output of the solar panels.
- Participate in the conception of a voltage regulator(10-15V) to protect the car battery.
- Work jointly with a team to analyze solar data and test solar panels and MPPT to optimize the car performance.

Projects

Robotic Arm

Nov 2024

- Designed a movable robotic arm on SolidWorks able to sting.
- **Tools Used:** CAD Design, SolidWorks

[portfolio/CAD/repo](#)

4-Bit Register

Oct 2024

- Created a register capable of storing a 4-bit binary value, with a clocked load input that stores the data on the rising edge of the clock signal
- **Tools Used:** Verilog, Vivado, Logic Circuit Design, Logisim

[portfolio/LogicDesign/repo](#)

Arithmetic Logic Unit (ALU)

Oct 2024

- Made a 4-bit ALU capable of performing basic arithmetic (addition, subtraction) and logical operations (AND, OR, XOR) based on control signals
- **Tools Used:** Verilog, Logic Circuit Design, Vivado, Logisim

[portfolio/LogicDesign/repo](#)

Plant data analyzer

Sep 2024

- Collaborated with a team to developed a device able to analyze data such as light, temperature and humidity with an STM32F401RE to moderate the plants health.
- **Tools Used:** STM32F401RE, C++, STM32cubeIDE, DHT11, TMP36 and LDR

[portfolio/Electronic/repo](#)

Automatic Solar Tracker

June 2024

- Designed an automatic solar tracker using an Arduino nano, sg 90 motors and LDR to maximize energy intake.
- **Tools Used:** Arduino Nano, LDR, SG 90 motor

Education

BASc University of Waterloo, Electrical Engineering

Waterloo, On