Jasmine Khalil

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○ jasminekhalil

Education

Pennsylvania State University   **State College, PA**
B.S. Electrical Engineering, GPA – 4.0/4.0   *2022-2026*

Skills

Programming	Python, C++, HTML/CSS
Software	Arduino IDE, Cura, Fusion360, TinkerCad, SketchUp
Tools	Git, Figma, LaTeX
Hardware and Prototyping	3D Printing, Arduino Nano, Arduino UNO

Selected Projects

Quadrature in Julia   **State College, PA**
The Julia Ecosystem

- Project in Julia for the quadrature of certain functions when provided with specific limits using the Midpoint Rule.

Ball and Beam Game   **State College, PA**
Personal Project

- Game where the aim is to balance the ball on the beam by adjusting the distance between your hand and the sensor.
- As the distance between my hand and the sensor decreases, the angle at which the servo moves increases from its initial position and vice versa.

Automatic Plant Watering System   **State College, PA**
Personal Project

- System that checks the moisture level of the soil in a plant pot every 24 hours.
- If the moisture level is less than 50 percent of the maximum moisture, then water is pumped into the pot for .6 seconds
- Uses a relay module, Arduino UNO, and capacitive moisture sensors as the main components.

Bluetooth Control Robotic Car   **State College, PA**
Active Project

- Currently developing a Bluetooth-controlled robotic car with a custom-designed, 3D-printed chassis.
- Uses an Arduino Nano, HM-10 module, and L293D motor driver.

Awards

The President Walker Award   **Penn State University**
- Awarded in recognition of my efforts toward earning a 4.0 cumulative grade-point average.   *2023*

Summer School Scholarship to Oxford/Cambridge University   **Cambridge University**
- Won a summer school scholarship to Oxford and Cambridge University.   *2021*

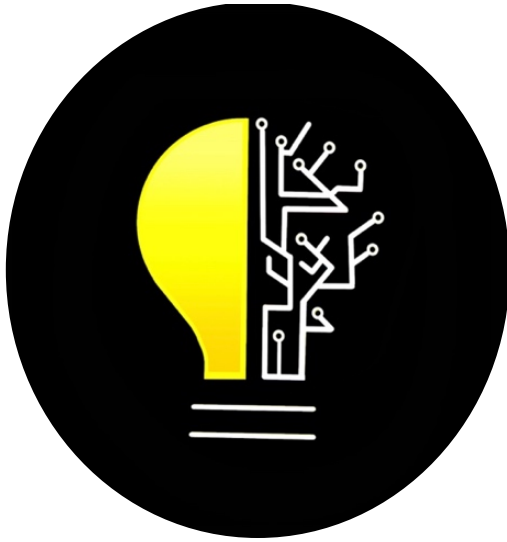**Award for Outstanding Effort**   **COBIS**
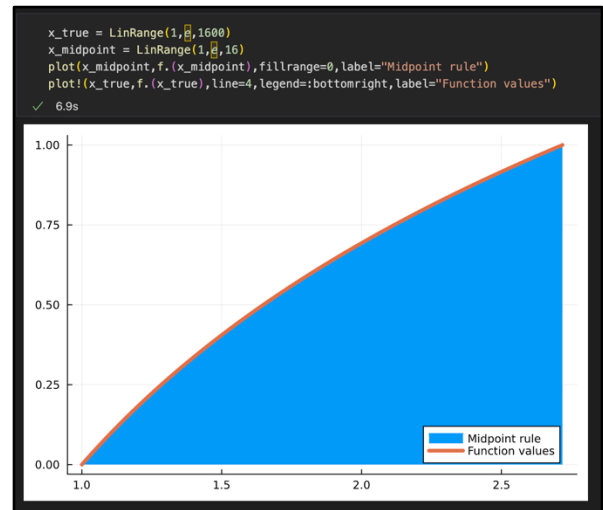- Awarded by the Council of British International Schools during the 2021 Student Achievement Awards.   *2021*

Projects


```
x_true = LinRange(1,e,1600)
x_midpoint = LinRange(1,e,16)
plot(x_midpoint,f.(x_midpoint),fillrange=0,label="Midpoint rule")
plot!(x_true,f.(x_true),line=4,legend=:bottomright,label="Function values")
```
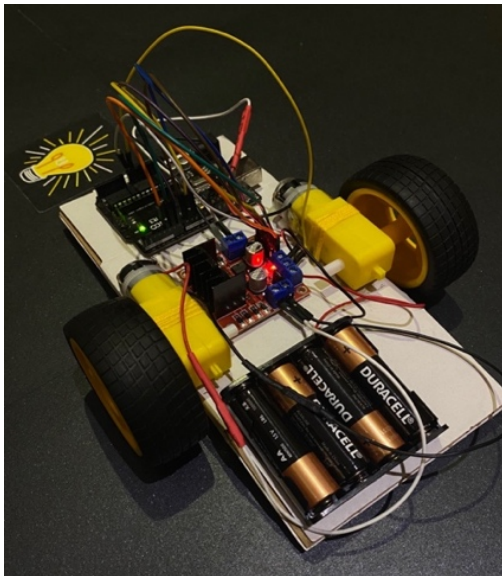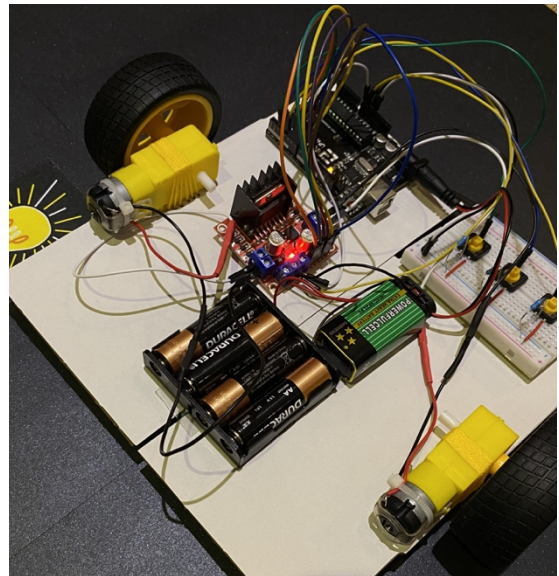
@projectportfolio
- An Instagram page presenting the development and result of all my current and previous projects.

Quadrature in Julia
- Project in Julia for the quadrature of certain functions when provided with specific limits using the midpoint rule.
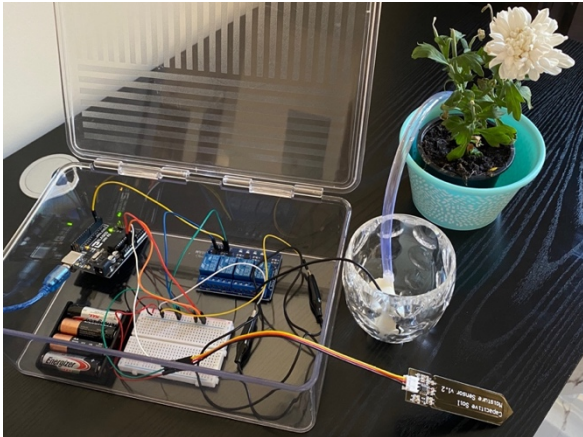

Car V1.0
- The car spins clockwise at max speed, stops for 2 seconds, spins counterclockwise at max speed, stops for 2 seconds and repeats that cycle again but at half speed.
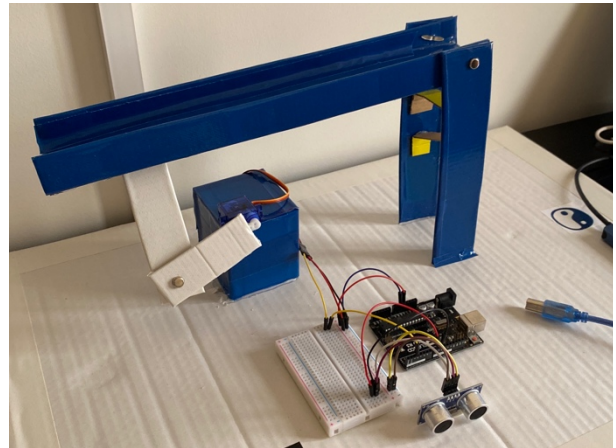- Built using an L298N motor driver for PWM.

Car V2.0
- When the first button is pushed, the car rotates CW at max speed. If the second is pushed, the car moves CCW at max speed. If the third is pushed, car rotates CW at half speed.

Projects

Automatic Plant Watering System

- System that checks the moisture level of the soil in a plant pot every 24 hours.
- If the moisture is less than 50 percent of the maximum moisture, then water is pumped into the pot for .6 seconds.

Ball & Beam Game

- Game where the aim is to balance the ball on the beam by adjusting the distance between your hand and the sensor.