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Tiam'sBot

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King Abdullah II School of Engineering
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Introduction

Our project is a Rubik's cube solver, the project is made out of six stepper motors and their drivers to control the ability to move each face of the cube. We used a cube solving application that scans the cube using a camera to generate the solution, store it in a text file and then send it serially to the pic to control the movement of the motors and solve the cube.

Design

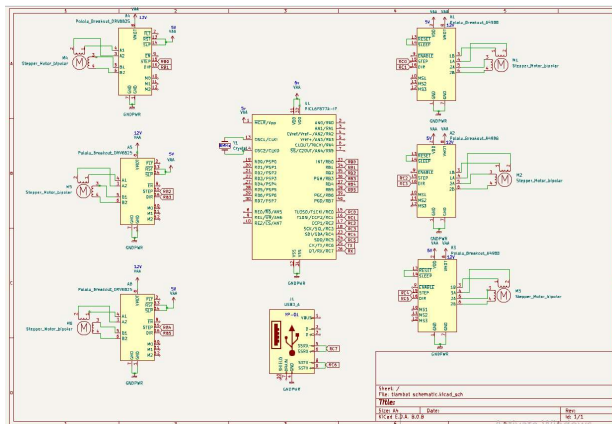


Figure (1)

- We used six stepper motors with their drivers which are three A4988 and three DRV8825.
- The drivers job is to control the movement of the stepper motors.
- We also used serial communication YP-01 (USB to TTL)

Flow chart

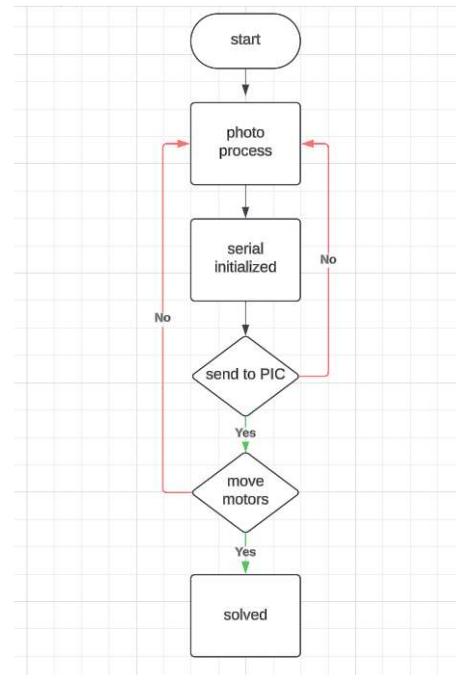


Figure (2)

Results

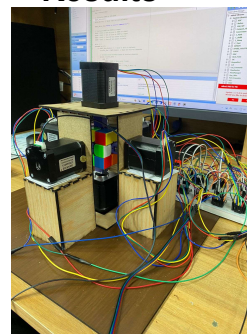


Figure (3)

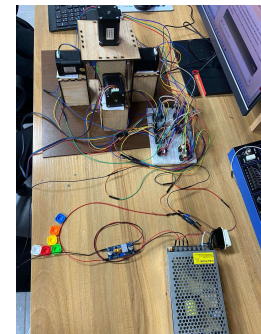


Figure (4)

This is our final result after lazer cutting the body of the project , and then insert the six stepper motors in place to start solving the cube.

Conclusion

To conclude, our project is a Rubik's cube solver that solves the cube with the help of six stepper motors and their drivers. Thus, by using it we can solve our Rubik's cube