Automatic Color Detector Launcher

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BACKGROUND

In the efforts to improve overall community Involvement, while also adhering to the current rule due to the pandemic, team Power Club proposed the idea of Automatic Color Detector Launcher (ACDL) as the Junior Design project. The idea was to create an automatc launcher that would select the target based on certain colors such as red, green, blue, etc.

INTRODUCTION

The device after acquiring a target, would then use the information available to correctly and accurate-ly aim at the object to launch a projectile. The use of some basic equations helped determine the mass of the ball, the distance at which the ball will be thrown and with what

Speed it will be thrown.

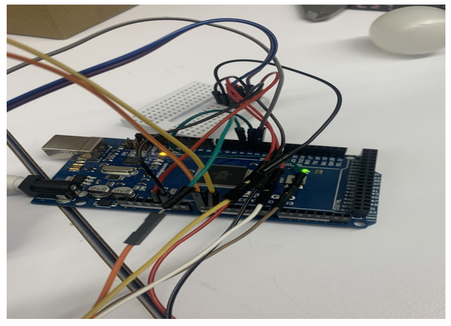
PROPOSED SOLUTION

Color Detection: The way it is achieved is by filter-ing out the colors perceived by the camera using the saturation and hue's of the required colors

3D Modeling : We had to make the 3D designed of the barrel and the base as it would be more effi-cient and more accurate.

SYSTEM DESIGN

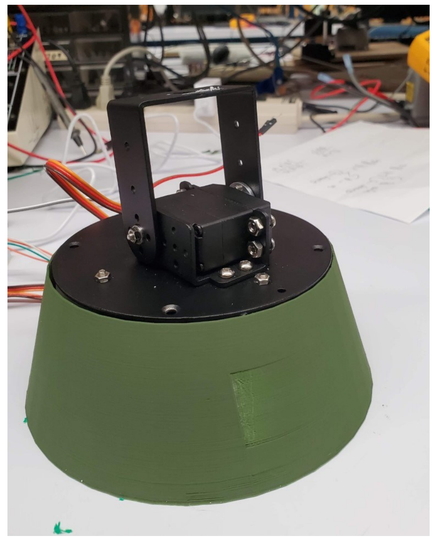
Electric motors were being used that run with enough power to launch a ping pong ball, required less connections and light weight to support the base and barrel.



We used an Arduino board, and connected with the motors that would act as a

power

supply.



We used Pan tilt that would be capable of remote direc-tion and detect colors using the color detection code.

FINAL PRODUCT

REFERENCES

Color Detection resource:
https://www.openvcsrf.com/2019
Harm Scale information:
https://www.ncbi.nlm.nih.gov

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CONTACT

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