Rotating Obtuse Grape Entrusting Robot Mk 1.5 (R.O.G.E.R.)

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INTRODUCTION

R.O.G.E.R. is a stationary drive that when detecting an object within 40 cm will fling a grape or small, light object towards them. He is meant to motivate both healthy eating and remaining away from a location.

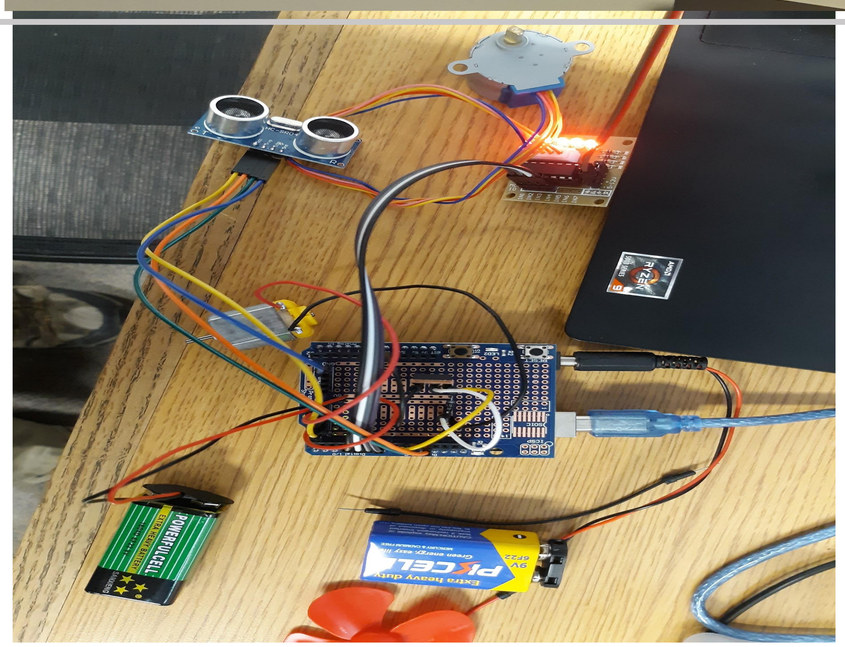
INPUT AND OUTPUT

R.O.G.E.R.'s main input comes from an ultrasonic sensor mounted at the top to act as a distance detector. There needs to be something within 40 cm, else R.O.G.E.R. would offer a grape towards nothing. He uses a motor as a firing mechanism when something is detected within 40cm and a stepper motor to rotate to search for a target

ARDUINO CODE

```
if (distance_cm < 40.0 && distance_cm > 2.0){
  digitalWrite(motorPin, HIGH);
  delay(300);}else{
 digitalWrite(motorPin, LOW);
if (flip == true){
  angle--;
  myStepper.step(100);
    if (angle <= 0){
    flip = false; }}else {
  angle++;
  myStepper.step(-100);
  if(angle >= 6){
    flip = true; }}}
```

This code is R.O.G.E.R.'s firing mechanism and rotation



COMPONENTS

Apart from his input and output, R.O.G.E.R. has three 9v batteries at his heart, each with their own killswitch. He has wheels for rotation, a modifiable skeleton, open access to edit code for the individual taste, and a fake grape in the base model to prevent stickiness and ants.

CONCLUSION

Like the name says, this is R.O.G.E.R. 1.5. I had great trouble with the weight on the stepper motor, so had to add wheels to what was going to initially be a simple heptagon base. The main lacking still is power, both in availability and power of the throw. A change to make to the throwing power would come with a reload system. By adding a servo holding back additional projectiles, the fan could get up to speed before hitting. R.O.G.E.R. 2.0 is coming.