

DogFeeder

Automatic Dog Feeder
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(project presentation example)

Where's my food?



A black and tan dog is standing on a tiled floor, eating kibble from a green automatic dog feeder. The feeder has a large clear hopper filled with kibble on top of a green base. The dog is looking down at the food in the bowl. The background is a wooden wall.

DOG
FOODER



DogFooder

DogFooder is a automatic pet food dispenser that dispenses a set amount of food for a pet each day.

Features:

- Customizable feeding times
- Web dashboard to let pet owner track how much food has been eaten
- Clear walls to indicate how much food is left
- Works with several different types of food
- Roomy food bowl

Demo

Technologies, tools, and starter code used

- HTML, CSS and JavaScript - control panel website
- Bootstrap framework - <https://v4-alpha.getbootstrap.com/>
- Arduino, Arduino SDK - microcontroller used to run the motors
- Arduino stepper motor code found at <https://www.arduino.cc/en/Tutorial/StepperUnipolar>
- NEMA 17 High Torque Stepper Motor
- Clear extruded 1/8th inch acrylic sheets
- SolidWorks to model and laser cut the acrylic

Challenges

- Laser cutting acrylic was something that I hadn't done before, and it took several tries so I had to use extra material.
- Mounting the motor securely in place was hard. I had to redesign the mount several times to arrive at a design that wouldn't deform when food was dispensed.
- As a user, it's hard to tell if your food setting will be correct (you don't want to starve your dog!) So I added a feature that lets users preview how much food will be dispensed by pressing a button.

Questions