

# PET FEEDER

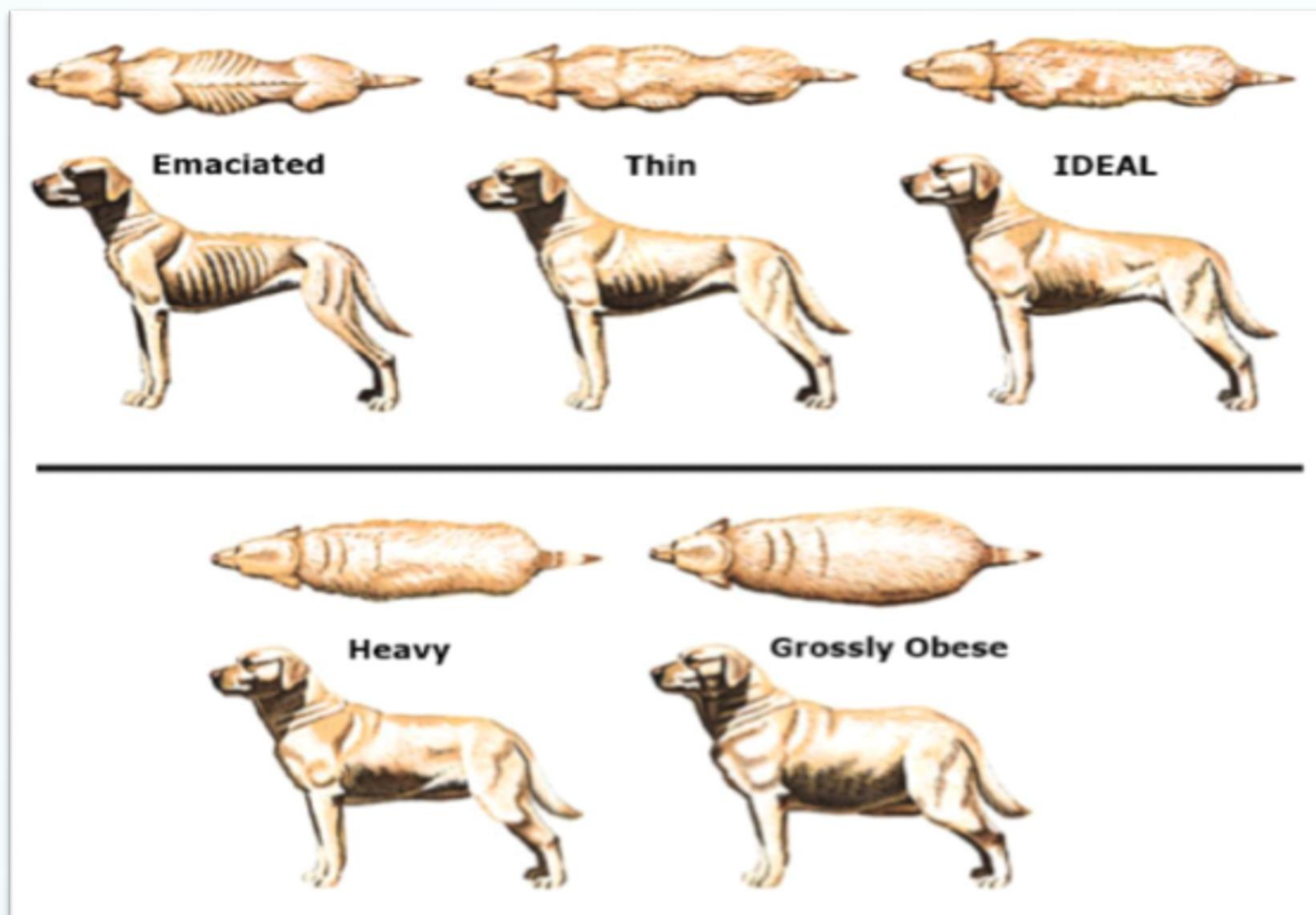
## Your Next Generation Pet Feeder For A Healthier Friend

Project Advisor: Terry Wang | Industry Sponsors: Dr. Maria Bromme & Dr. Ashley Dewey

### BACKGROUND

Veterinarians estimate 52% of dogs and 57% of cats in the US are overweight. The main reasons are:

- Food portions don't correspond to pet's ideal weight and size.
- Failure to administer recommended supplements for pets.
- Measuring food and dispensing supplements is time consuming and a messy task for pet owners.



### GOAL

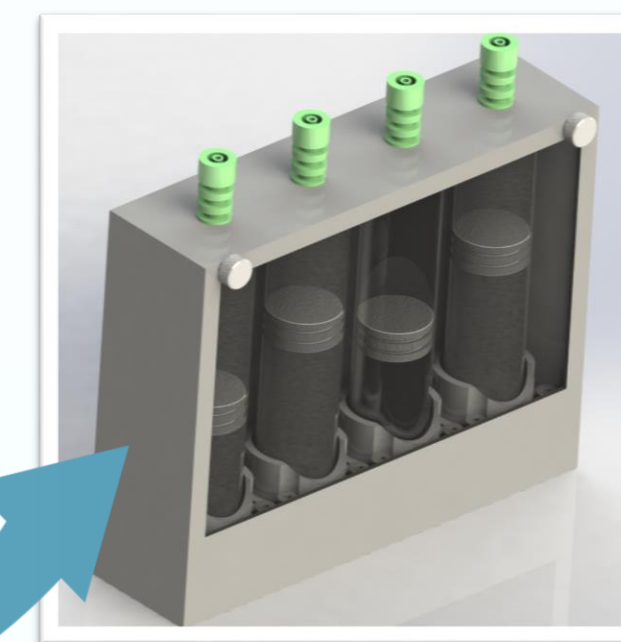
Design and prototype a user friendly, mechanical pet feeder that dispenses veterinarian recommended amounts of dry food and liquid supplements, based on pets' needs.

### THE BIGGER PICTURE

Current pet feeders on the market do not address supplement dispensing and often have an inaccurate way of dispensing food. Our design will provide pet owners with an accurate and easier way to dispense food and supplements with the purpose to keep pets healthier and happier.

### INNOVATION AND DESIGN

Our target customer is the person who considers their pet a family member. Someone who wants to be able to monitor their pet's diet and well-being closely without too much effort; someone who appreciates practicality, while at the same time wants to keep an appealing and attractive look for their kitchen.



#### Supplement Dispensing:

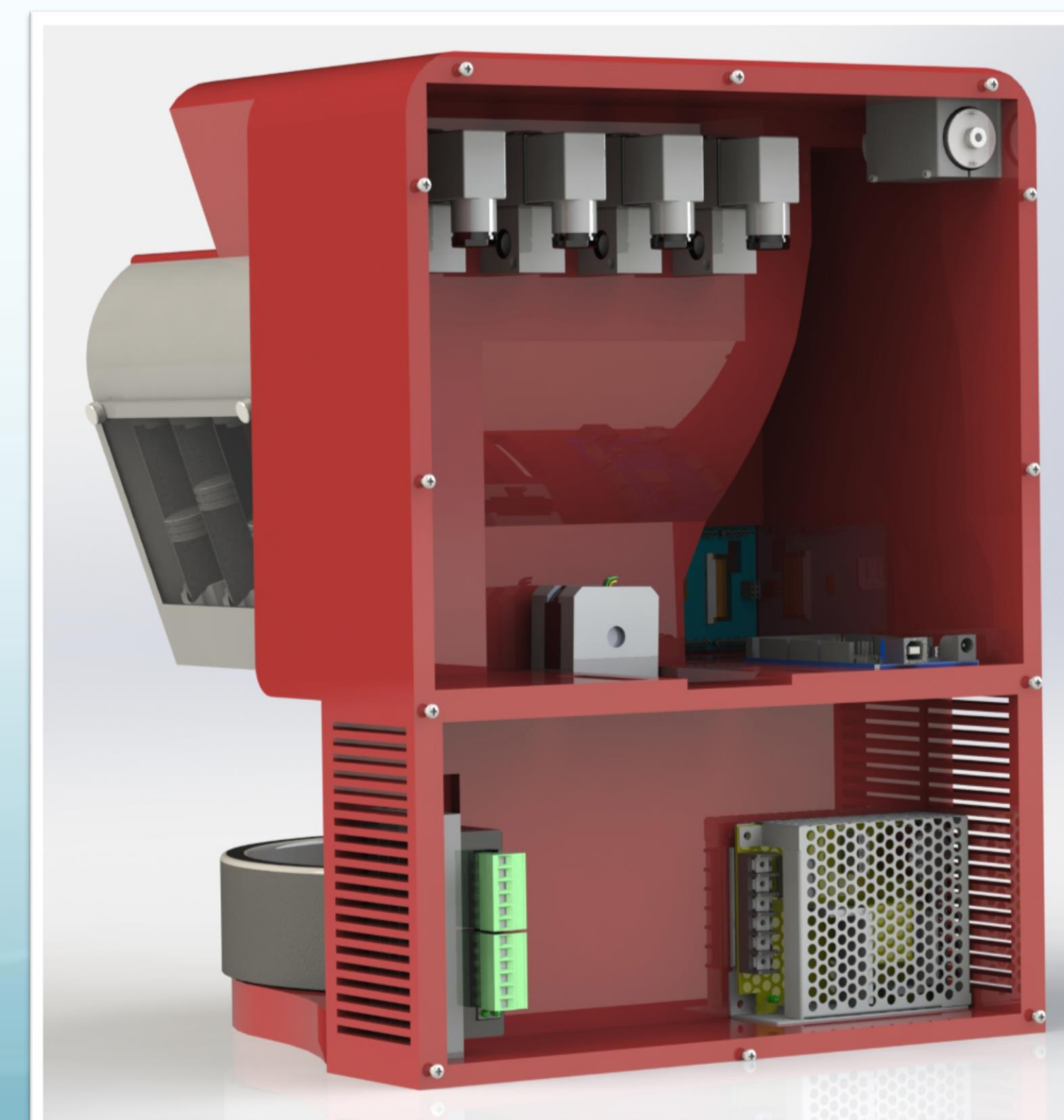
- 30 ml individual, disposable cartridge
- Cartridges have a one-way valve nozzle and a screw-on lid.
- Up to 4 cartridges
- Accuracy of 1 ml for a small pet, 2 ml for a medium pet (+10%)
- Spring loaded cartridge positioning
- To dispense the fluid, 1 pump is used to supply air to 4 solenoids valves. Volume of liquid is replaced by volume of air pumped inside the cartridge.

#### Human Interface:

- Touch Screen
- Allows user to input information about the pet:
  1. Ideal weight
  2. Type of supplement
- For up to 6 pets
- Saves information in data base
- Override options
- Algorithm to dispense food based on veterinarian pets ideal weight

#### Food Dispensing:

- Dry food only
- Pets between 4-60lb
- Accuracy of 1 oz. (+10%)
- Food Storage is removable with capacity for up to 3.5 lb.
- Bottom and top lid to ensure freshness
- Motor rotates the star ball and releases food based on algorithm triggered by human interface.



### NEXT STEPS

Our sponsors, Dr. Dewey and Dr. Bromme, have started their own company called *theanimaldocs* to continue their goal of keeping pets healthy worldwide.

The pet feeder will be patented, manufactured, and marketed as *Pet Barista* in the near future to complement their product offering. To learn more about their cause, follow *theanimaldocs* on Instagram.



Instagram

*theanimaldocs*



### PROTOTYPE COST

| Category                | Cost   |
|-------------------------|--------|
| Electronics and Sensors | \$750  |
| Water Jet Fabrication   | \$275  |
| Fabrication Materials   | \$800  |
| 3D Printing             | \$80   |
| Miscellaneous           | \$200  |
| Total                   | \$2105 |

### TEAM



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