**Project 1 (Dog Water Bowl Auto Refill Device)**

**Purpose**

The project plans to keep a dog water bowl filled without having to refill it when people aren’t present or forget to refill the bowl.

**Client**

**Audience:** Dog Owners

**Objectives**

* Refill water of dog bowl automatically.
* Runs on long lasting battery.
* Detect water level thresholds (both low and high).

**Parameters**

**Technical**

* Dimensions: Has to be able to fit in a medium banker box (18 in. x 15 in. x 14 in.)
* Weight: A little heavier than a medium dog water bowl (2 lbs max)
* Any tech used would have to be more resistant to water damage

**Functions**

* Displays the amount of water stored in container that automatically fills bowl
* Detect when the water level is low
* Detect when the water level is high
* Displays when container of water needs to be refilled

**Operational**

Battery wouldn’t be much of an issue with this device lasting for at least half a year before needing to replace battery.

**Environment**

The typical environment this device would likely be found in is indoors.

**Future**

* A separate dispenser filled with either food or treats for dogs

**Glossary**

TBD

**Project 2 (RC Car)**

**Purpose**

Control an RC car through the use of smartphones via WiFi.

**Client**

**Audience:** RC car enthusiasts, engineering students

**Objectives**

* Control car through an app on phone
* Make the RC car rechargeable(usb-c)

**Parameters**

**Technical**

* Dimensions: Around the size of a regular RC Car preferably slightly smaller
* Weight: About 3-5 pounds
* Can adjust velocity like the volume button on a TV remotes

**Functions**

* Has adjustable speed
* Movement is similar to real car
* Wirelessly controlled by phone

**Operational**

Battery life might be around 24 hours before needing to be recharged.

**Environment**

This would likely be found outdoors. This means this vehicle should be able to at least withstand light wetness, mud, uneven terrain.

**Future**

TBD

**Glossary**

TBD