Client Feedback

| Section | Feedback | Implementation |
| --- | --- | --- |
| Gardening | Lots of technical work, but great ideas | Decided not to implement it, due to the complex nature of this task. |
| Hard to program the water-soil ratio and what plants need what |
| Try scaling it down |
| Running | Can hone into the guard dog type (protection) | Decided not to implement it, due to how it would be hard to convey. |
| Assistance | Aging in place (a key priority for them) | Made our main goal to help aging in place. We will use surveys and use feedback to find out what people want. Robomaster will not keep any data collected for data privacy. |
| Don’t guess what people want |
| Data privacy and protection |
| Food delivery | Don’t put to much weight because its only four motor | We will only be using props and light weight items |
| Questions | No Permanent connection | Will have to use string for connections instead of tape/gule |
| The video is a trailer for an art experience | Will make the video in the style of a movie trailer |
| Try merging the ideas | Instead of picking one idea we will combine all of them in to a main theme( Companionship robot) |
| Don’t use the robomaster with water | Will not be able to take the robomaster outside |

*Table 1: Client Feedback and Implementation*

Prototyping and Test Plan

Conveyance of message

What:Asking the client for feedback

Why: Allows us to identify areas for improvement

When:20 minutes / February 11

Length of travel of delivery

What: Attached the wagon to the robomaster and had it travel in a straight line

Why: To identify if the robomaster is able to travel from point A to B with the food on board

When: 5 minutes / March 2nd

Documentation:

* Moved the attachment location of the ribbon from bottom to the midpoint
* Changed what material the connector is made of

Lights

What: Program in DJI Education hub, the robomaster to lights

Why: To see if the lights are visible, able to turn on and change colour.

When: 10 minutes / march 2nd

Documentation:

* The lights are separately programed
* Made it blink along with changing the colour

Handling the weight of the pizza.

What: Add weight to the wagon and test how much the robomater is able to pull.

Why: To identify if the robomaster will be able to pull food, pills and other objects

When: 20 minutes / march 2nd

Documentation:

* Prototype of wagon design
  + Made of plastic plant cart
  + Punctured a small hole to screw in a hook
  + To make more personably
    - Attached googly eyes with hot glue
    - Attached pipe cleaner arm and mouth
* Weight: 776 grams
  + Can carry it easily

Audio output from the robot.

What: Robomaster plays sound ques. Different sounds for different situations

Why: To see if it can it can play audio

When: 20 minutes / march 2nd

Documentation:

* Can play piano notes
* The custom audio not available

Setting the speed of the robot.

What: Change the speed of the robomaster

Why: Ensure the robomaster does not move too fast causing items from the wagon to spill out.

When: 5 minutes / march 2nd

Documentation:

* Robomaster Was originally set at 2-3 m/s was to fast
* Set speed to 0.25 m/s

Detecting people / objects

What: Be able to detect people and objects in front of it.

Why: Once detected the robomaster will be able to avoid collisions.

When: March 9th

Documentation:

* Will be finished in prototype 2

Film Video

What: Be able to film video through robomaster.

Why: Be able to add a POV shot in the video

When: March 2nd

Documentation:

* Only hold five photos
* SD mini chip
* DJI Education hub programed

Prototype 2 Plan

4 Prototyping 2 and Test Plan Table

| Number | Objective | Test Method | Usage of Results | Stopping Criteria | Test Duration  (date) |
| --- | --- | --- | --- | --- | --- |
| 1 | Conveyance of message. | Survey before and after client meeting. | To iterate the message of the video. | Satisfaction from the client  (incomplete) | 10 minutes / March 3rd. |
| 2 | Length of travel of delivery. | Can the robot travel 10m without the pizza falling off. | To determine whether this section of our user needs is met. | Once it Moves 10 m  (complete) | 10 minutes / March 1st. |
| 3 | Handling the weight of the pizza. | A repeat of test 2, as well as whether the robot can still travel 10m with it. | To determine whether the food delivery objective of our project is met. | Be able to handle 500 g  (complete) | 10 minutes / March 1st. |
| 4 | Audio output from the robot. | Can the robot output custom audio. | To be used for interaction in all objectives for the robot. | Be able idea though audio | 10 minutes / March 1st. |
| 5 | Setting the speed of the robot. | Can the robot travel at 28 km/h. | To be used when delivering food to the customer. | Can travel at 0.5m/s  (complete) | 10 minutes / March 1st. |
| 6 | Turning on/off of the lights. | Can the robots light’s be programmed in a way that they turn on and off/ | To be used to add a level of interactivity to the robot. | Be able to control lights and light colour  (complete) | 10 minutes / March 1st. |
| 7 | Detecting people / objects. | Can the robot successfully detect a given colour. | To make sure the robot does not run into objects. | Be assemble detect humans  (Incomplete) | 10 minutes / March 9th. |

*Table 2: Table of prototyping and test planning.*

| Number | Type (what) | Objective (why) | Fidelity | When To realise |
| --- | --- | --- | --- | --- |
| 1 | Comprehensive | Overall message | High | March 3rd. |
| 2 | Focus | Movement of Wheels | Low | March 1st. |
| 3 | Comprehensive | Weight Bearing | Medium | March 1st. |
| 4 | Focus | Audio Sound | Low | March 1st. |
| 5 | Focus | Movement of Wheels (engine) | Low | March 1st. |
| 6 | Focus | Light brightness | Low | March 1st. |
| 7 | Focus | Video detection | Low | March 9th. |

*Table 4: Further expansion of prototyping tasks.*

Images