Seol-Yee (Jennifer) Lee, Spring 2020

Lidar Sensor Box

design goals

use durable, cheap material
easy movement for panning and tilting
waterproof

past design

plastic box with acrylic “window”
motors held together by paper clip hinges
epoxied to thrust ball bearing

restrictions

waterproofing
clear plastic manufacturing + visual distortions
dimensions
idk how to manufacture anything except for 3d printing

lidar + 2 motor

lidar-lite v3

size 51x25x25 mm
cost 128.95

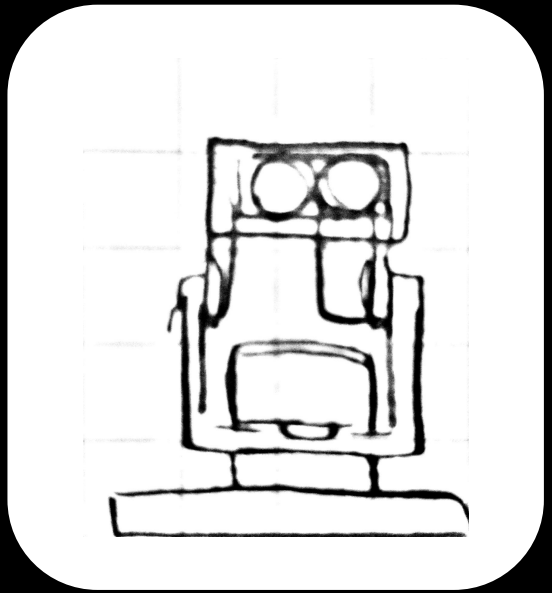
lidar + 2 motor

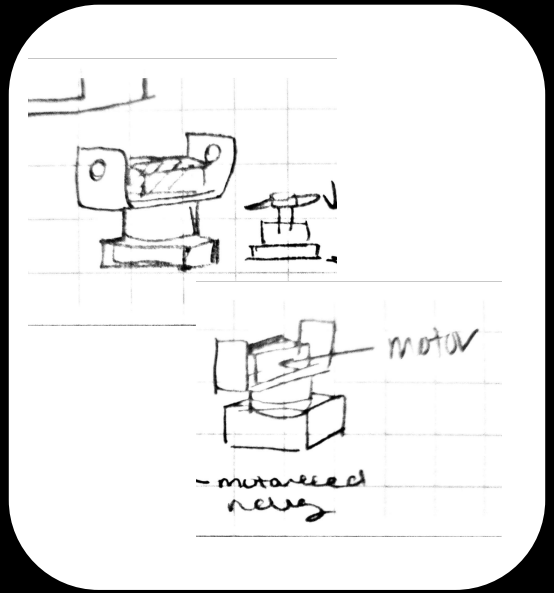
micro servo

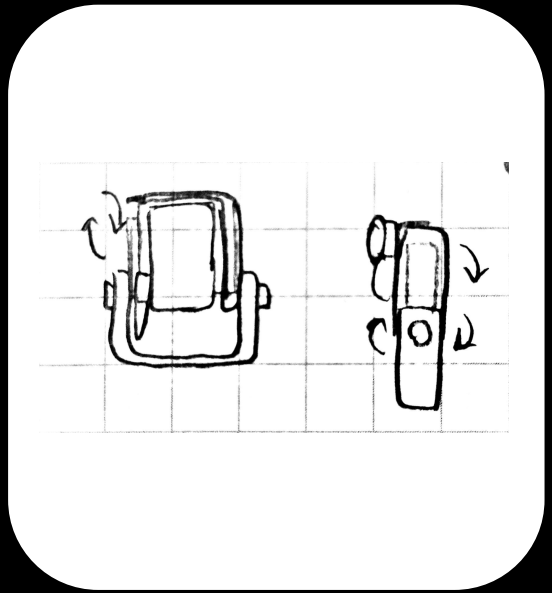
tilt	90° CW & CCW
size	23x11x29 mm
cost	5.95

lidar + 2 motor

design ideas







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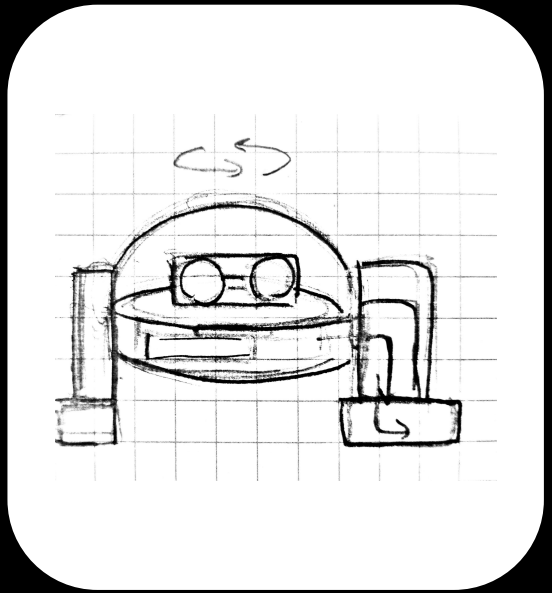
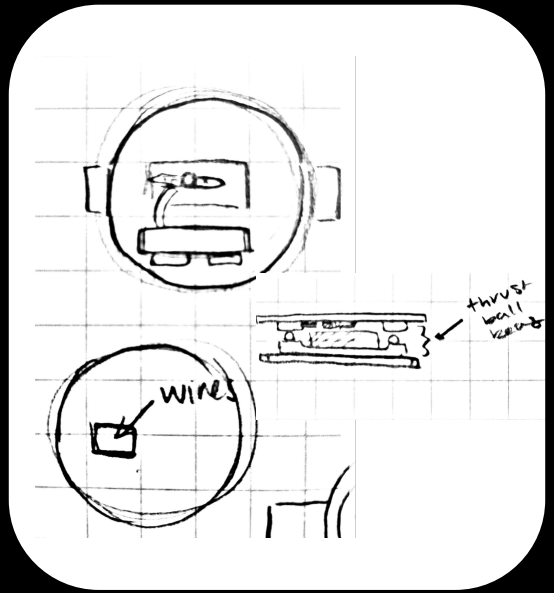
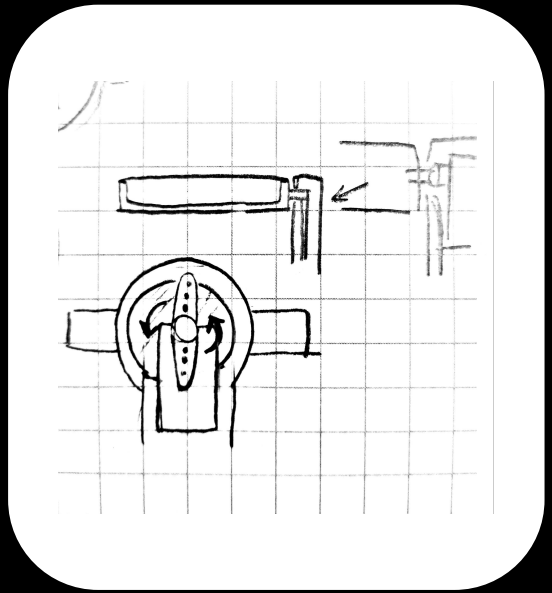
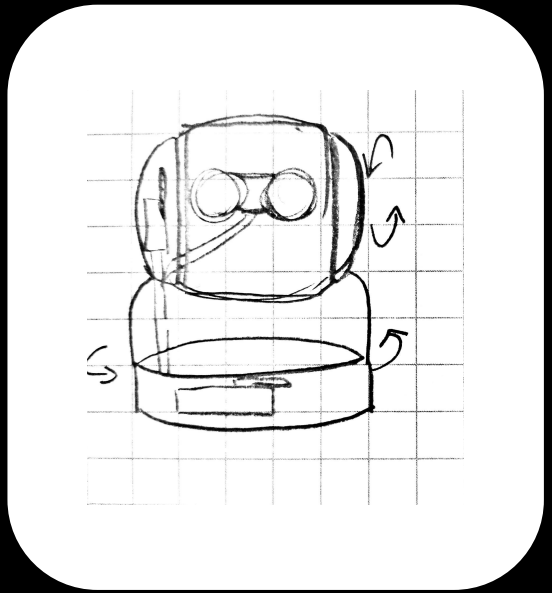
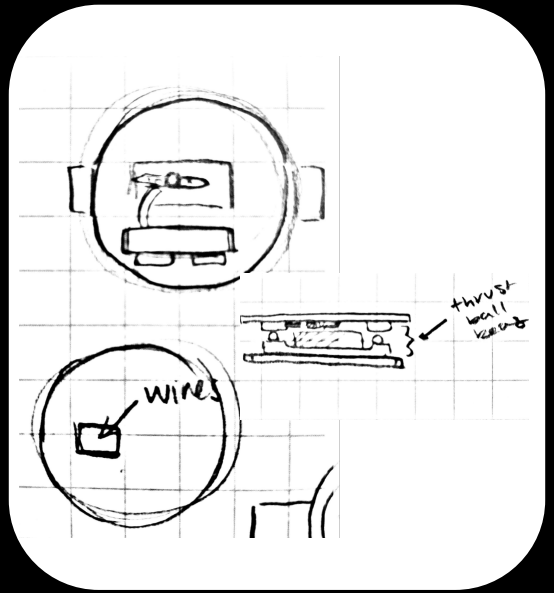


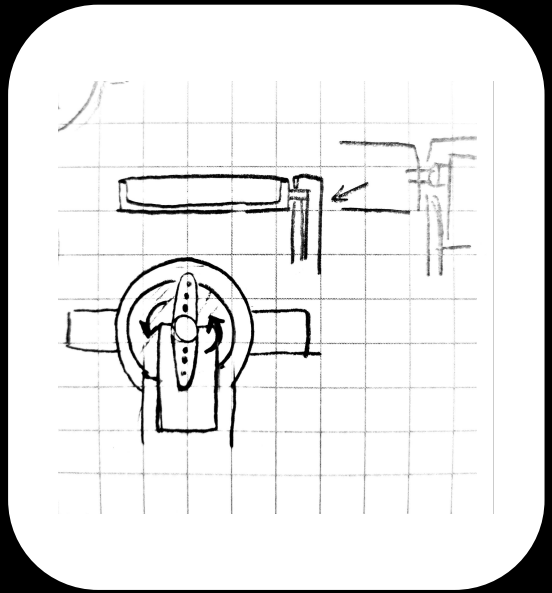




r2d2







webcamera

to buy

Koller Products Panaview 1-Gallon Globe Fish Bowl		4.74
Skate ball bearing	----	5.33
acrylic sheet (6” x 6” x .25”)	8560K358	5.82
micro servo (2)	169	11.90

how to build

3d printing + epoxying
haven’t gotten dimensions from navteam
sanding/cutting

future steps

figure out all the dimensions
order the micro servos (?)
test refraction of plastic material
test waterproofing