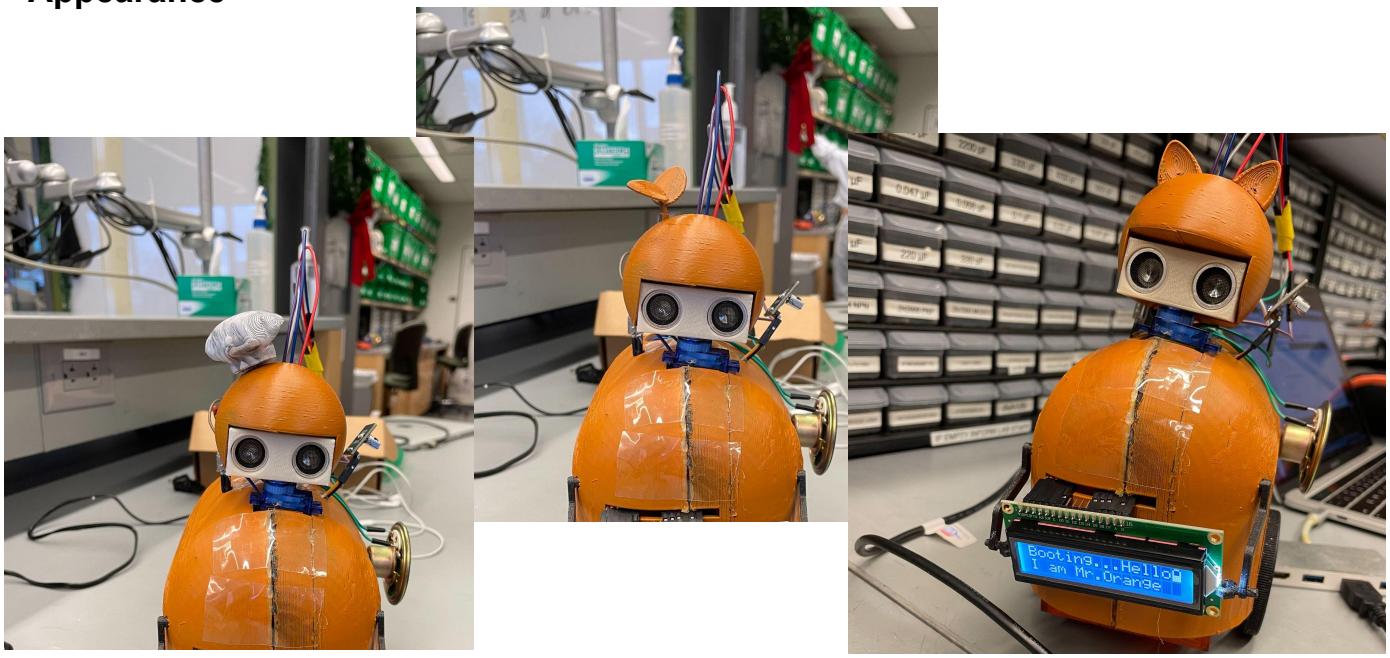
Mr. Orange final demo

Group 5: Yining Guo, Haoer Shi, Hanyu (Han) Gong, Jingxuan Guo

Appearance



Mr. Orange When chef hat/ leaf/ cat ears on its head

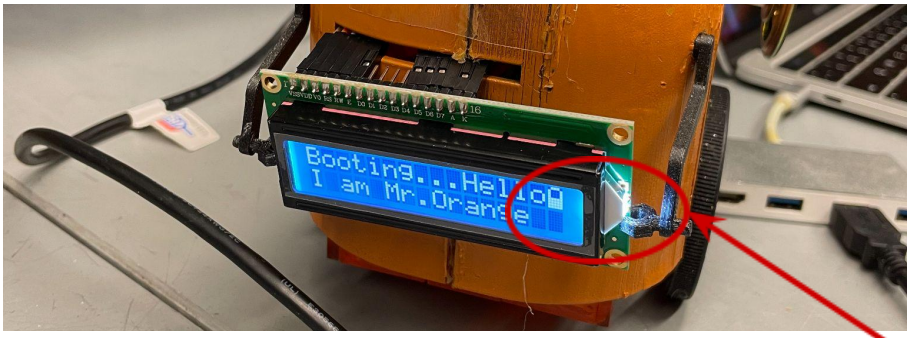
Remote control & Autonomous Motion Demonstration



This is an intuitive explanation of how to control the robot's motion using an IR board. The Autonomous motion allows Mr. Orange to auto navigate and avoid potential barriers.

Demo Videos link:
https://drive.google.com/file/d/1MCSHkoS5f42LN2ul3CMMVt1zD7i7Gt4b/view?usp=sharing
https://drive.google.com/file/d/1Ur7IDE5-AcMFc3aCjpgPsaOOFHIsWL2L/view?usp=sharing

Battery



Notice: Battery life indicator

These are what you can validate yourself:

1. Turn on/off the robot using the battery box switch attached at the back of the robot
2. Remote control the robot using IR board according to above instructions
3. Modify outlook of the robot by swapping different adornment: the leaf, the chef hat, and the cat ears
4. Heat sensing alarm: when the tip of the thermistor (the little red bump on the right side of the robot body) is touched and given the body temperature (>35 Celcius), an alarming message will be reported from the speaker
5. The battery life indicator on the LCD screen constantly tracks the battery health. This is essentially similar to the Iphone's battery indicator. If the 9V battery is of high charge, the battery icon will be fully filled, otherwise the battery will exhibit a half filled icon and the speaker will report the message: "Low battery".

These are what we have to connect the robot to PC to demonstrate, since we won't be able to do that, we included links of demo videos here
Demo for voice assistant in final prototype:
https://drive.google.com/file/d/1iUEZJxo-46DRZbYAxZV5_mvAQ0E26JIS/view?usp=sharing
https://drive.google.com/file/d/1AxXKLMQmesH-8g_6hto20p-pRiAZ-ENK/view?usp=sharing
More demos in intermediate state:
Voice assistant:
Greeting:
https://drive.google.com/file/d/1yUWs4Zz1drETpG9lyA8GZFD8Chni-3m2/view?usp=share_link

Light control:
https://drive.google.com/file/d/1F1MtPkVDvvePMRSm7y_9DIbibRivNy18/view?usp=share_link
Joke:
https://drive.google.com/file/d/1A-mFPTnhsR4osM9X_1KQ2471VRMD0kbj/view?usp=share_link
Reminder:
https://drive.google.com/file/d/1UbJwf-g6pAX679q8cvJOLkZqxiSpCY2b/view?usp=share_link
Recipe:
https://drive.google.com/file/d/1Nz1TNDAFeEDBIAlRcyA6d5meaI3DXZU-/view?usp=share_link
Missing items:
https://drive.google.com/file/d/10JORwo4RMZfTBP61WZnO7s9QeezMYs3Q/view?usp=share_link

These videos basically show that if we say something to the PC voice recognition app, the words will be recognized and uploaded to the robot and the robot will give a response. Some voice and text messages are incomplete due to limited memory of the Arduino board.
Example full audio:
https://drive.google.com/file/d/1IzstniZEmcDxIHupqrMw49-40CB11110/view?usp=share_link
https://drive.google.com/file/d/1nLKfYxvQM5HoccrZTSojiuiFBNQSCBOs/view?usp=share_link

Link of used resources:
HeyAthena, voice assistant: https://github.com/rcbyron/hey-athena-client
Spoonacular, recipe database: https://spoonacular.com/food-api/docs
Grocy, ERP system: https://en.demo.grocy.info/stockoverview
https://demo.grocy.info/api#/

For a more detailed working mechanism introduction, see the video below (~10min).
https://drive.google.com/file/d/1cG9tmwH6SiuxcfZffXkK-WCaiW7aUOW8/view?usp=share_link