SIT217 - Robotics Project

K4.5 - The Rover Pet

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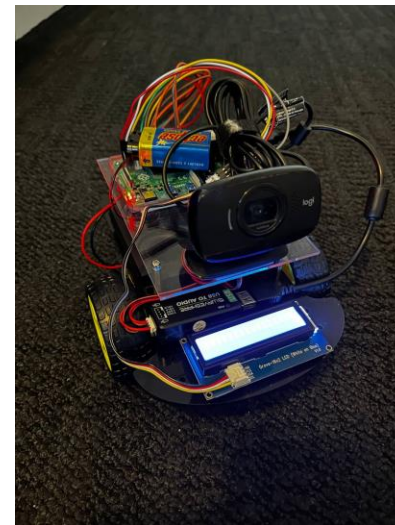
K4.5?

"Why do I have such a name?"
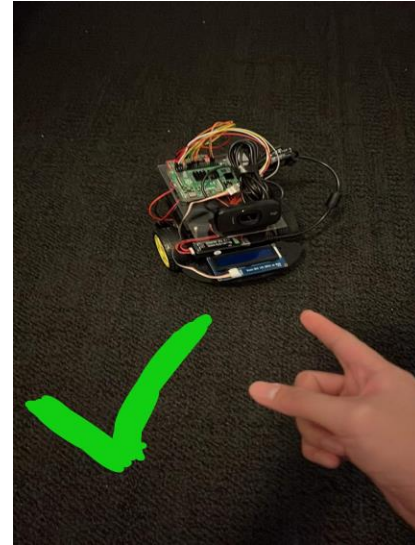
-     Emotions   =

K9

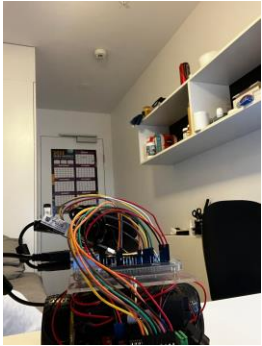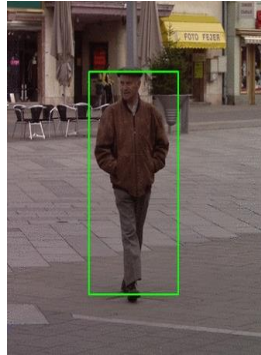K4.5

What can I do?

1. Voice recognition

"Hey four point five"

2. Safe - Guard mode
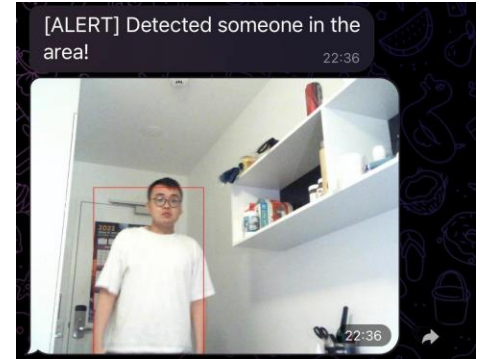
Guide me to the guarding area ⟶ Activate the mode

I will guard the area

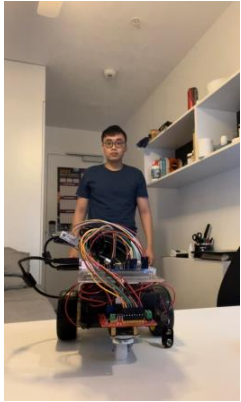If there is any person enter the area
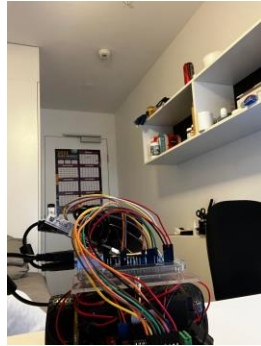

I will sound the alarm

[ALERT] Detected someone in the area!   22:36

Capture & send the image to your mobile phone
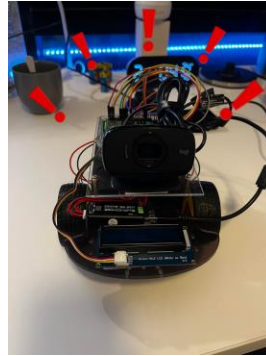
3. Safe - Keeping mode

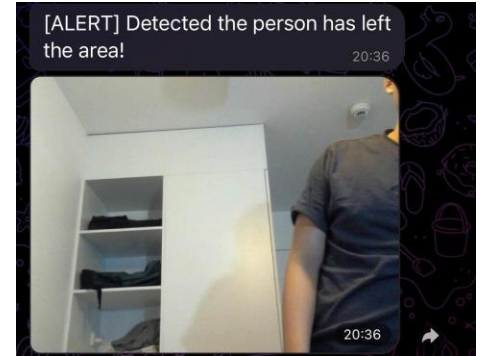Control me facing the person need to be kept ⟶ Activate the mode

I will keep my eye on the person

If the person try to leave/escape out of sight
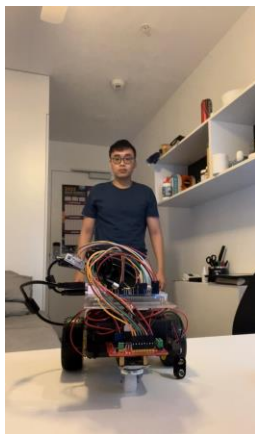

I will sound the alarm

[ALERT] Detected the person has left the area! 20:36

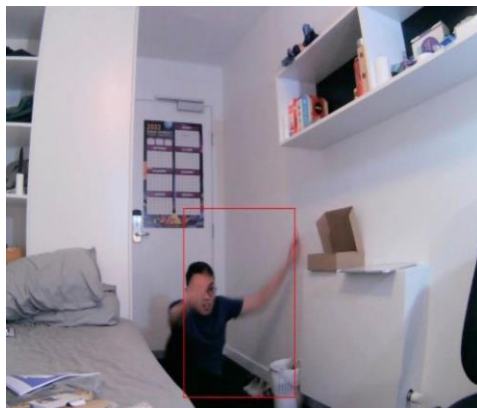Capture & send the image to your mobile phone

4. Fall Detection mode
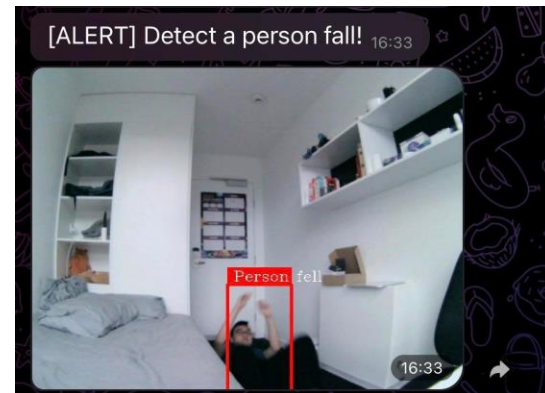
I can detect if someone fall down

(This mode is very helpful for old people or babies when they're at home alone)

I will keep my eye on you
when you're working

If I see the you fall down

I will sound the alarm, send
message to your emergency
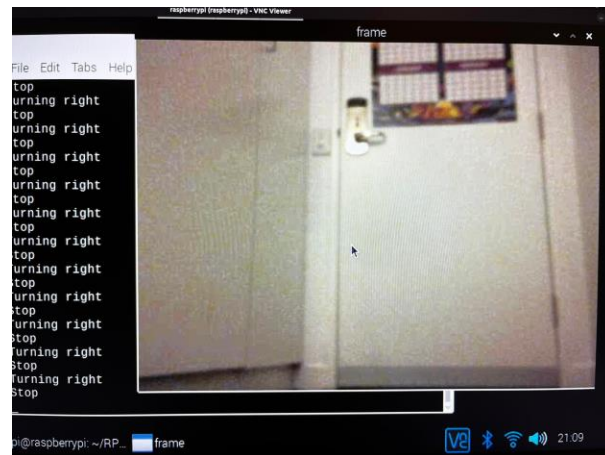contact

5. Spy mode

A mode for you to explore a surrounding, or any places you wish to
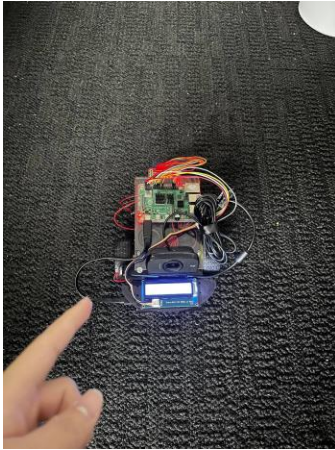

I can be control wirelessly

Control me by keyboard with "W", "A", "S", "D" key, just like the game
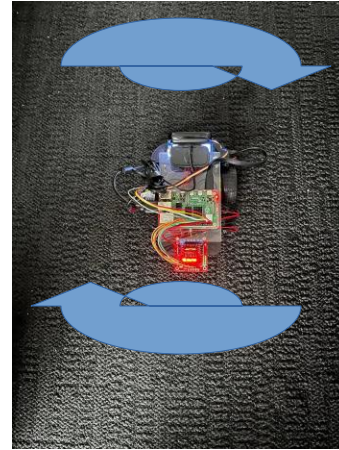

You will be able to see what I see

6. Calculate math

I am smart. I will be able to listen and analyze your voice command if you're asking me to calculate a basics math problem.
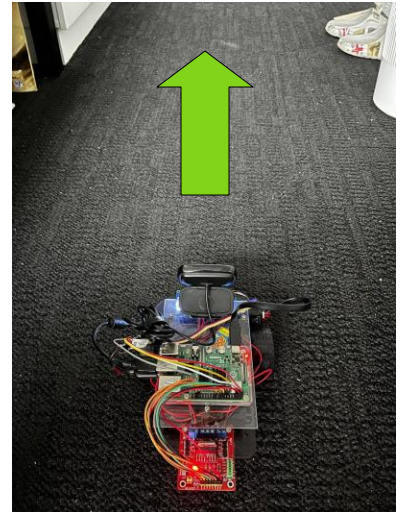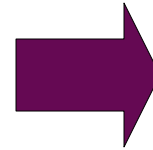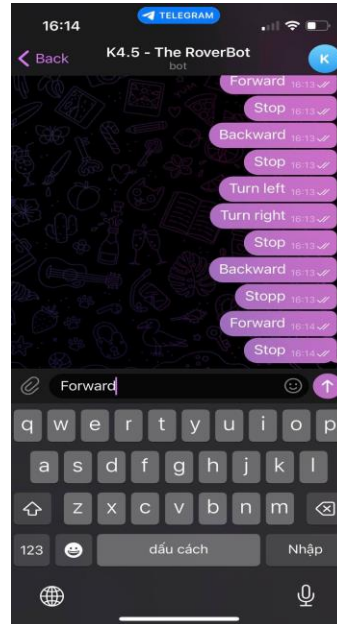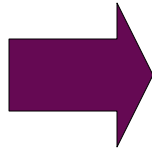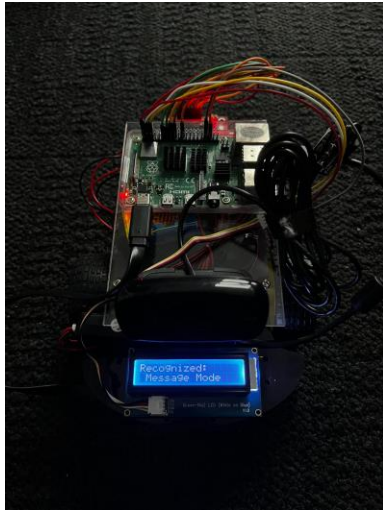

2 + 3 = 5

Ask me: "What is 2 + 3?"

I will spin around 5 times

7. Message command

I have my own Telegram channel, and you can command me what to do by just texting me

8. Follow-me mode (Beta)

I will be able to detect and follow you with your hand gestures

I can look to the right if you are moving to the right

Also, I can look to the left if you are moving to the left
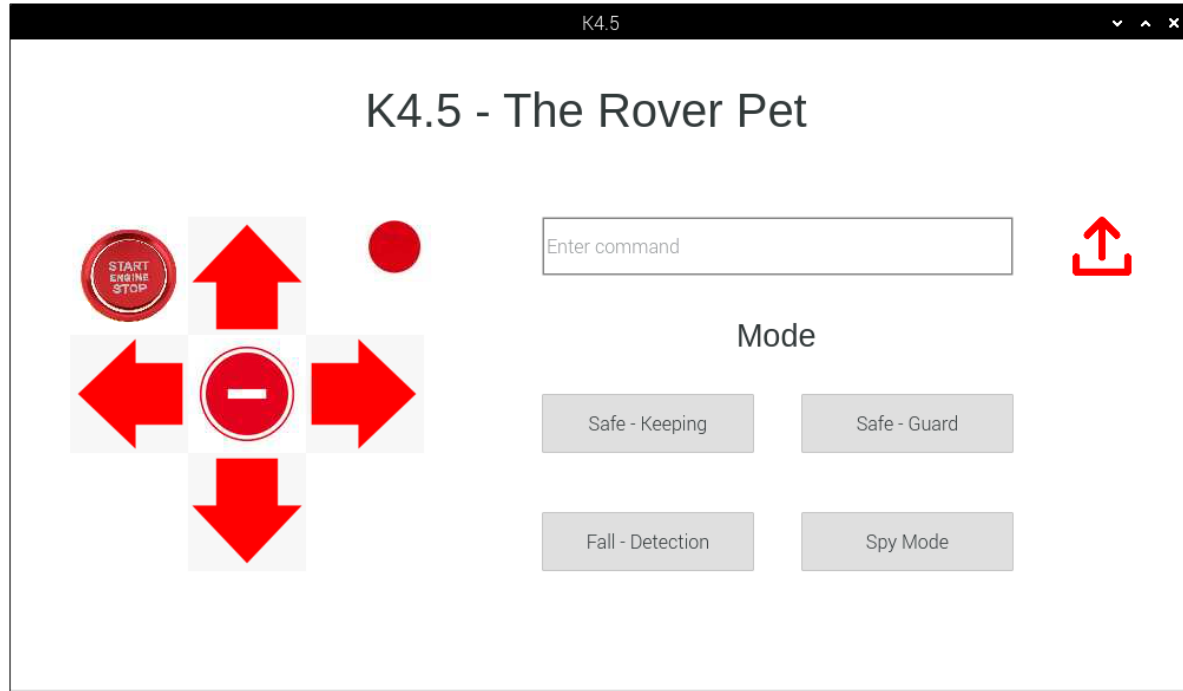
I will run forward if you wave your hand

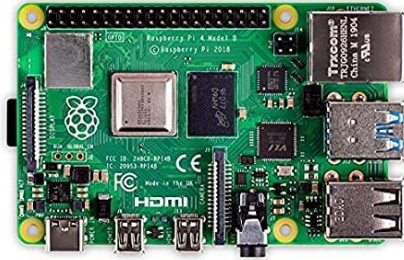I will stop running if you stop waving me

Interesting fact

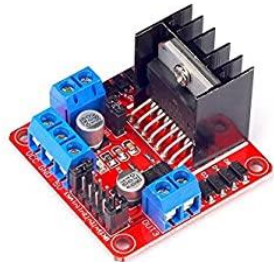# I have my own GUI

About the hardware
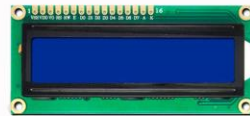
Raspberry Pi 4 Model B 8GB

Waveshare USB to Audio

Logitech B252 Webcam

L293N Dual motor driver module

16x2 LCD Display module

2 wheel-drive chassis kit

That's all!

Thank you for your attention