Musics 🎶🎵🎼🎧🎤

Try say “local music” to it, the pet will start to play the song you download in the system. In addition, you can use “next song”, “last song”, “volume up”, “volume down” to command it, (btw remember to wake it up first using EmoEmo). Since this is an immersive function, you need to say something like “stop music” to exit Music plugins.

Movements👹🕺🕺

Play-Ball-with-Me 🏐!

You can ask the pet to play ball with me using order “play ball”. In this function, the pet will be hunting the tennis ball. This function is realized using Hough Circle Detection and HSV color resolve.

Look-at-Me 👀!

As a loyal pat, EmoEmo will keep it eyes on you sometimes. Activate this function using the keyword “look at me”. The pet will then keep it eye (it’s camera actually) on you. This function is realized using face detection and pantilt control.

You-Are-Free👈👀💃🕺🐾!

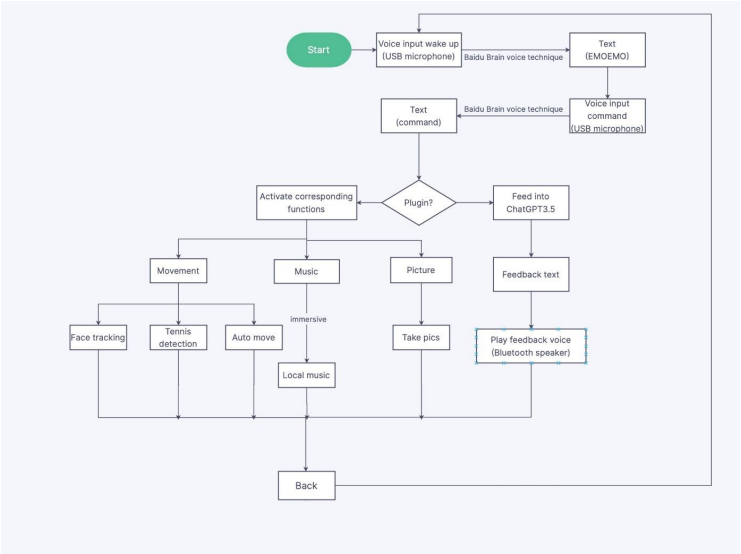
As a mischievous pet, EmoEmo also runs around inside the house. To prevent it from breaking any expensive vases in your home, we have specially designed an automatic obstacle avoidance function. With this function, the small pet can freely run around inside your home. This feature is implemented by three ultrasonic modules and two infrared modules.

Camera 📷

Imagine you are at home partying with your friend, would you like to have a photo that all of you are in it? Well, EmoEmo can do it for you! Just say something like “take a picture” to it, it will do it for you in 3 seconds!

Cute Face 😊😍😻😘😽👻🦊🐰🐻🐼

Pay attention to the OLED face of our pet, it will surprise you!



High-Level Requirements List

• Functionality: The electronic pet should be able to perform all the desired functions reliably and accurately. It should be able to follow objects, display a range of emotions on its screen, recognize and respond to voice commands, avoid obstacles, and interact with pan-tilt using face following.

• User experience: The electronic pet should be easy to use and interact with. Users should be able to easily control and communicate with the pet through its display screen and voice recognition system. The pet should also respond to user interactions fun and engagingly.

• Durability and stability: The electronic pet should be built using durable and stable components to ensure that it can withstand regular use without breaking down. The car should be stable enough to navigate different terrains and avoid obstacles without getting stuck or tipping over.

Subsystem Verification /50

Power

A stable power supply allows the Raspberry Pi and motor to operate well. /5

Voice-Interaction

Basic function of “listening” & “speaking”. /5

Keyword spotting. /5

AI conversation. /10

Music Playing. /2.5

Photo taken. /2.5

Facial-Interaction

Face-tracking. /5

OLED expression changed with scenarios. /5

Movement-Interaction

Basic function of four-direction movement. /2.5

Obstacle-avoidance. /2.5

Tennis-following. /5

RobotGPT-EmoEmo

——Team 31 Raspberry Pet Pal

Raspberry Pi Based Smart Pet Pal, Your Best E-Company

Introduction

Emoemo is a small pet that does not shed and does not require you to scoop its waste or feed it, can accompany you like a traditional pet while also functioning as an intelligent assistant. As a pet, it displays a range of expressions, follows your face like a small pet, runs around the house like a small pet, and can play ball with you like a small pet. As an electronic pet, you can ask it any question and it will provide corresponding answers based on GPT-3.5. Additionally, it can play music and take photos for you. It is worth noting that despite having so many functions, it is very affordable with a cost of only 1500 yuan. Of course, you will also need to employ four diligent female engineers to help you manufacture it.

Function

The whole system is voice-controlled. All the functions begin with a keyword spotting, in our case, it is EmoEmo. After waking the pet pal up with EmoEmo, you can say any order to it. It will first check if this order can activate a plugin. If it can, the system will run the corresponding functions. If not, it will ask GPT-3.5 for the answer. The plugins here are Musics, Movements and Camera.

AI

The pet is connected to Chat-GPT, so you can ask it anything!