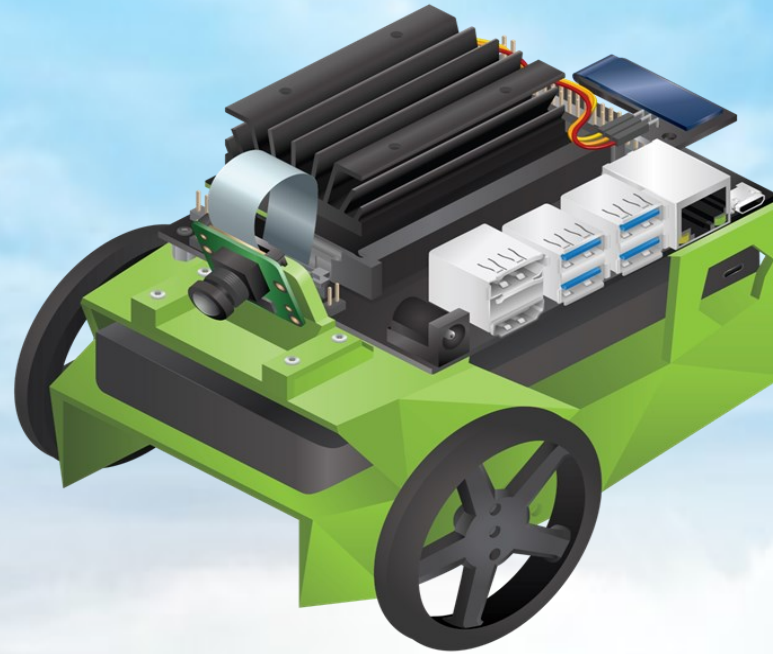


By Padraig Ó Cosgóra

AI Companion

BEng in Software & Electronic Engineering



Project Description

The AI Companion Robot is a home-assistant robot. The AI Companion will intelligently operate around the house and can serve as your eyes and ears when you're away from home. Equipped with machine learning capabilities for financial news sentiment analysis.

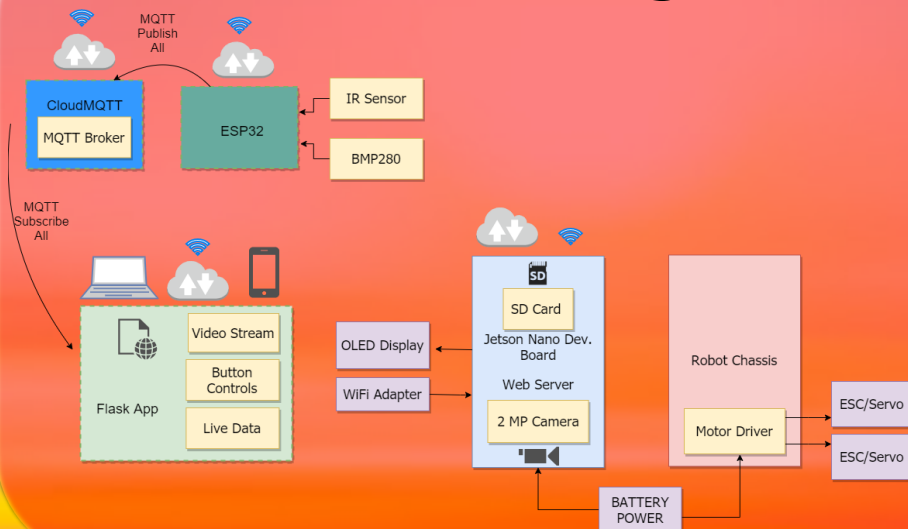
Hardware

Development Board: Jetson Nano, ESP32

Sensors: CSI camera, OLED Display, IR Sensor, BMP280

Robot chassis: motor driver (TB6612), 2x servo motor, 3D printed body

Architectural Diagram



Results

The AI Companion Robot can intelligently operate around the house by avoiding objects and recognising objects or can be controlled remotely for home security. Daily financial news sentiment analysis on any stock.

Skills & Technologies



- Python programming
- Machine Learning—Object Avoidance, Object Detection, Financial Sentiment Analysis
- Servo motor control
- Agile project development
- Flask web server programming
- Problem solving
- Cloud Computing