Task Description

Visual Inspection

For this project, your task is to create a visual inspection system employing a camera. The system should detect abnormalities in machinery such as loose screws, jammed parts in production lines, oil leaks, warning signals, unauthorized access, or entry into unsafe areas, and promptly alert the user. You have the option to develop a prototype of the machinery part and utilize a controller equipped with image processing capabilities to execute the task.

Luggage Follower

Your task involves building a hardware model of a luggage carrier. This model should feature a camera capable of capturing the target, typically the user, and autonomously track the target's movements, halting when the user stops. To achieve this, you can utilize a controller with image processing capabilities and embedded functionality to manage both image processing and control of the embedded hardware components within the system.

Weather Reporter

Your task is to retrieve weather information from an open API and showcase it on an Indian map. Under regular circumstances, the weather details should appear on the map at their corresponding positions (eg weather at Chennai, Mumbai, Kolkata, Delhi etc) Additionally, when someone stands in front of the camera, the Indian map with weather details should highlight the person. Moreover, wherever the person points their finger, the weather details should display only at that location.

Water Tank/ Plant Pot

Your task involves developing an IoT-based water level indicator with an automatic cutoff feature. The system should display the water level on a mobile phone. Additionally, the mobile app should enable control of the motor, eliminating the need to send data to the cloud. You can establish a connection between the device and mobile via WiFi. Float-type sensors are to be utilized in the tank.

Plant Pot

Your task is to design a miniature soil level indicator for plant pots. When the moisture level is low, a red LED should illuminate; otherwise, a green LED should light up. The system should feature a built-in rechargeable battery with a low voltage indicator, along with a recharge port for convenience.

AR monitoring

Augmented reality monitoring involves displaying sensor data on a mobile phone when the camera is focused on the device.

Hardware Chat gpt

You are expected to develop a hardware system that utilizes the ChatGPT API. It should accept voice input and deliver the output through a speaker.

AR Switch

The Augmented Reality Smart Home Switch aims to revolutionize traditional light switches by incorporating augmented reality (AR) technology. Instead of physical switches, users interact with virtual switches projected onto surfaces using AR glasses or a smartphone app. When activated, these virtual switches control the lighting fixtures in the room, offering a seamless and futuristic user experience.

Chat bot

Design an AI-powered Organization Assistant Chat Bot to enhance internal communication and productivity within the organization. It serves as a centralized platform for employees to access information, complete tasks, and interact with various departments seamlessly.