組別 Team ID：202311

專題屬性 Category：AIoT 應用（AIoT Applications）

專題名稱 Project：AI 心ㄟ厝（A Reassuring Home）

一、 指導老師 Advisor：李朱慧老師（Prof. Chu-Hui , Lee）

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三、 系統環境 System environment：

（一）軟體 Software：

作業系統 Operating System：Windows10、11

語言 Programing language：Python、Java、JavaScript、Html、CSS、PHP、MySQL

開發工具 Toolkits：Anaconda Spyder、Pycharm、Android studio、Notepad++

網頁伺服器 Web Server：Wampsever64

（二）硬體 Hardware：電腦、滑鼠、鍵盤、攝影機、麥克風。

四、 簡介：

（一）系統簡述（系統的主要功能）

「AI 心ㄟ厝」運用人工智慧開發一個非接觸式電梯系統，提供住宅所需的安全功能，隨時偵測暈倒、抽菸、火災等狀況的發生，除此之外還有因應寵物增加開發的寵物偵測功能，防止寵物走失的同時也避免流浪動物進入住宅，能夠有效預防跳蚤和傳染病的傳播。

系統主要分為保全端和客戶端，保全端透過網頁即可隨時監控住宅大樓的環境安全，客戶端則是提供手機應用程式，讓客戶隨時隨地都能接收火災通知、緊急求助以及提前呼叫電梯，讓大樓建設都能以低成本提供住戶安全又便捷的環境。

（二）特色（系統的亮點）

- 安全偵測：透過攝影機對大樓環境的監測，能夠掌握有無寵物、抽菸、火災、暈倒等。
- 無接觸電梯：透過手指比出想去的樓層按鍵，即可辨識出使用者想到達的樓層，此方式能減少直接接觸，提供更衛生和便利的體驗。
- 語音電梯：透過語音來操作電梯，無需觸摸按鈕，減少了人們接觸公共區域表面的風險。
- 手機應用程式：有提早呼叫電梯與緊急連絡人求助的功能，只需 Google 帳戶登錄，即可使用。

五、 Introduction：

Introduction

"A Reassuring Home" uses artificial intelligence to develop a contactless elevator system. The safety functions required for the house to detect the occurrence of fainting, smoking, firing and other conditions at any time are also provided in the system. Besides, the pet detection function are developed for pets, which can effectively prevent the spread of fleas and infectious diseases by preventing pets from getting lost and avoiding stray animals from entering the house.

The system is mainly divided into the security end and the client, the security end can monitor the environmental safety of the residential building at any time through the web page, and the client provides a mobile phone application, so that customers can receive fire notices, emergency help and call the elevator in advance anytime and anywhere, so that the building construction can provide residents with a safe and convenient environment at low cost.

Features

- Safety detection：Through the monitoring of the building environment by the camera, it can grasp whether there are pets, smoking, fire, fainting.
- Contactless elevator：By comparing the buttons of the desired floor with their fingers, users can identify the floor they want to reach, which reduces direct contact and provides a more hygienic and convenient experience.
- Voice elevator：Operate the elevator by voice without touching buttons, reducing the risk of people touching surfaces in public areas.
- Mobile app: There is a function to call elevators and emergency contacts for help in advance, just log in with your Google account, you can use it.