Summary:

The project involved developing a system that used an ESP32 camera to stream video to a PC while incorporating image processing and object detection. The main goal was to analyze the video stream in real-time and send commands to control a car based on detected objects.

Technologies utilized included the ESP32 camera for video capture, Python for implementation, Flask for facilitating communication between the camera and PC, and OpenCV for image processing, object detection, and tracking. Transfer learning techniques were applied to train a custom model based on a pre-trained neural network, enabling accurate object detection specific to the project.

In summary, the project integrates an ESP32 camera, Python, Flask, OpenCV, and transfer learning to create a system that streamed video, performed real-time image processing and object detection, and controlled a car based on the detected objects. This project demonstrated the potential of computer vision and IoT integration in practical applications.