RoboWheel

Autonomous vehicles, also known as self-driving cars, can understand and navigate their surroundings without any assistance from humans.

Today's self-driving cars use sensors and cameras to gather information about the surroundings and rely on computer vision, machine learning, and other programs to interpret and react to it.

This project involved developing a system that streamed video from an ESP32 camera to a PC and by image processing determining the speed of the car. The main goal is to analyze the video stream in real-time and send commands to control the car based on detecting road signs.

The technologies utilized include the ESP32 camera for video capture, Python for implementation, Flask for facilitating communication between the camera and PC, OpenCV for image processing, and pytorch for ML.

As a result, this project demonstrated the possibility of integrating computer vision and the Internet of Things in practical applications.

