

CS 8611 – Mini Project Final Review & Demo

Smart Parking System using IOT

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Presented by

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Abstract

- A smart parking system is a technology-driven solution that aims to optimize parking operations by efficiently managing available parking spots in real-time.
- The main benefits of a smart parking system are reduced congestion, improved traffic flow, reduced pollution, and enhanced user experience.

Objective

- The main objective of the project is to implementing Parking Management System is to reduce time and increase efficiency of the current Parking Management System.
- In overpopulated cosmopolitan zones, parking strategies must be well implemented for management of vehicles.

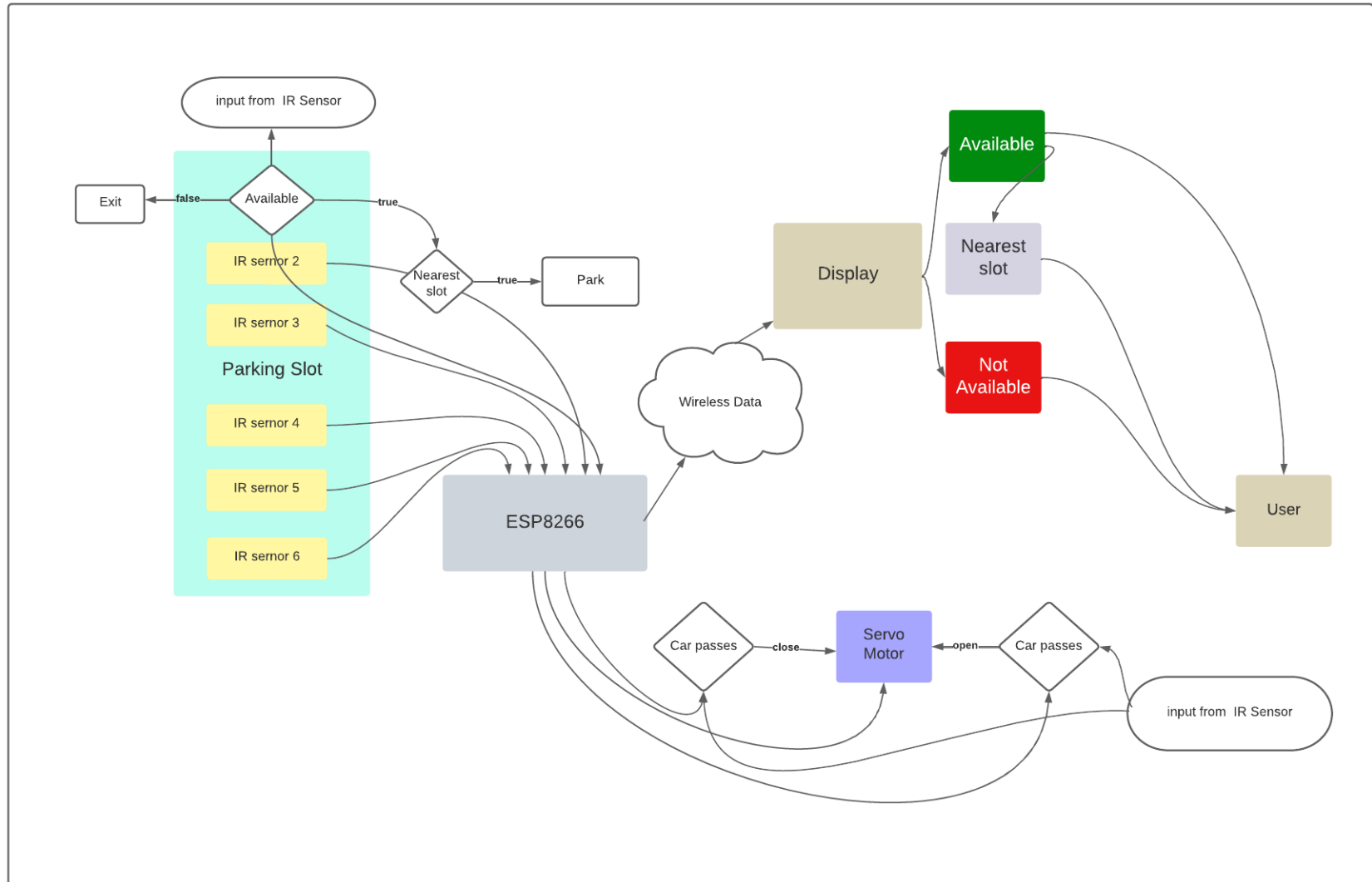
Problem Definition

- Car parking is a major concern in order to prevent time and space complexity.
- This system typically consists of three main components: a sensor network, and a user interface.
- The information collected from the sensors and provides real-time updates on parking availability relevant data.

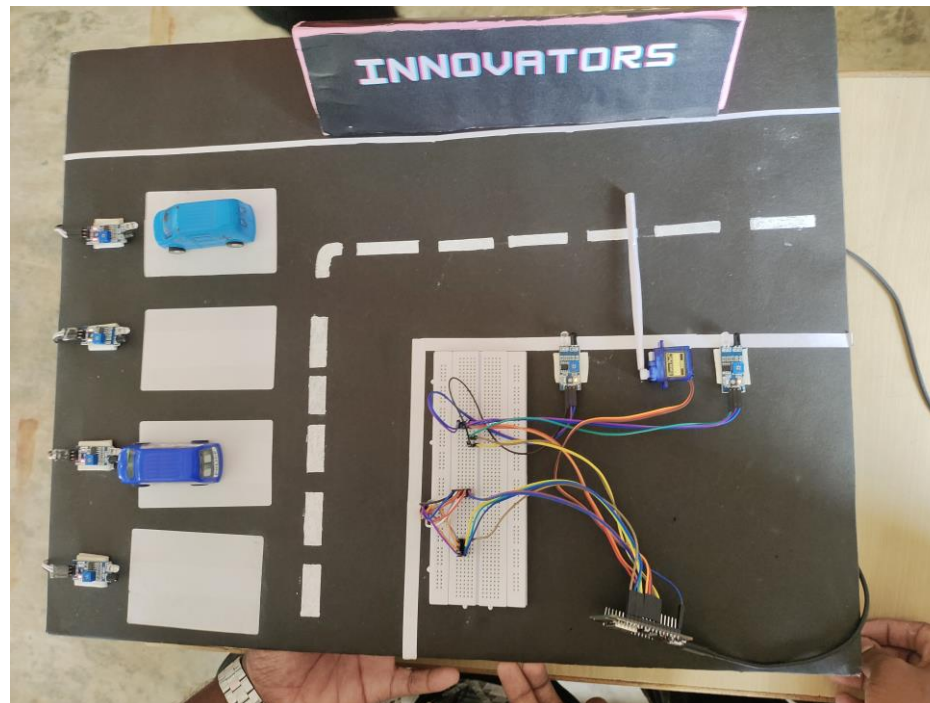
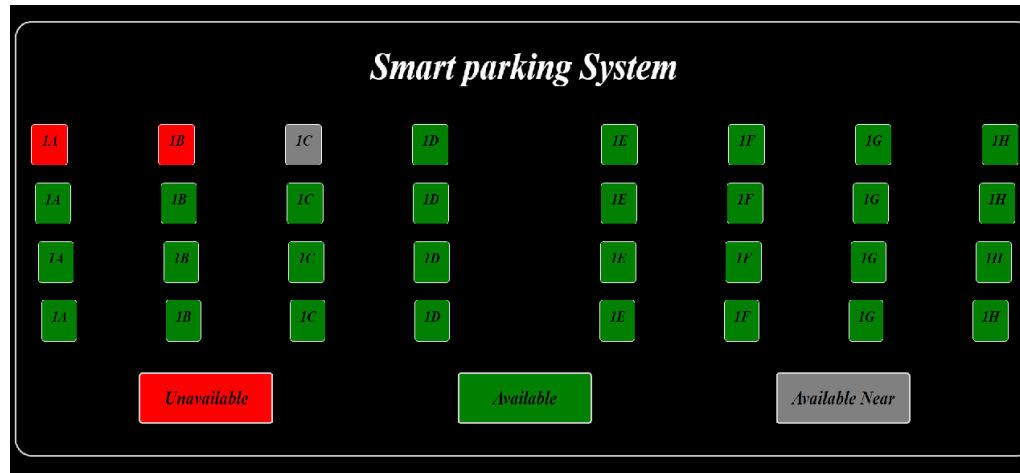
Proposed Solution

- The Wi-Fi module ESP8266 collects data from the IR sensor and converts the values to the strings. The sensor data wrapped as proper strings.
- Wi-Fi module uploads the data to Server where the processing of data takes place .
- The values are compared to the threshold values which gives the result that whether the slot is empty or not with a predefined algorithm.
- And using Nearest path Algorithm , nearest slot will be displayed .

Architecture Diagram - For Whole Project



Screen Shots



Conclusion and Future Scope

- As a conclusion, this project will help in reducing the amount of time a driver has to spend around the parking just to find an available spot, reducing the amount of traffic around the parking and also reducing the bad parking around the parking space.
- The Smart parking system based on Slot booking is our future idea. Using the slot allocation method we can book our own cheapest parking slot.
- It is an efficient one for solving parking problems, which overcomes the traffic congestion also provides automated billing process.

THANK YOU