



Smart Robot Solution

(Infinity Smart Robots, United States of America)

Industry: Food Technology, Robotics, Automation in Hospitality, Food & Beverages

Platform: Android

Tech Stack:

- Mobile App: Flutter, Java, Robot SDK
- Back-end: Laravel

Project Overview:

The client owns a sushi restaurant and introduced smart delivery robots in their restaurant to give a flavour of atomization to the customers. These delivery robots take care of delivering the food from kitchen to the specific table. Robot can be sent to the Kitchen, Customer Table or Charging Station.





Challenges / Problem Statement:

By default, the Robot can be controlled by using the tablet mounted on the top of the Robot. Practical challenge faced by the client was that to give any command to the Robot they must physically go near the Robot and touch the tablet mounted on top of the Robot. This made a life of staff bit difficult as they have to interact physically with multiple Robots. This resulted in frequent involvement of the staff as well as grimy hands can affect the cleanliness of the Robot and its tablet.



Solution:

We built a mobile app which allows the client to control all the Robots using their personal mobile hence avoiding physical touch with the Robots. For this solution we used the SDK provided by the Robot manufacturer. This required building a fresh mobile app as well as modifying the default Robot control app installed on the tablet mounted on the top of the Robot.

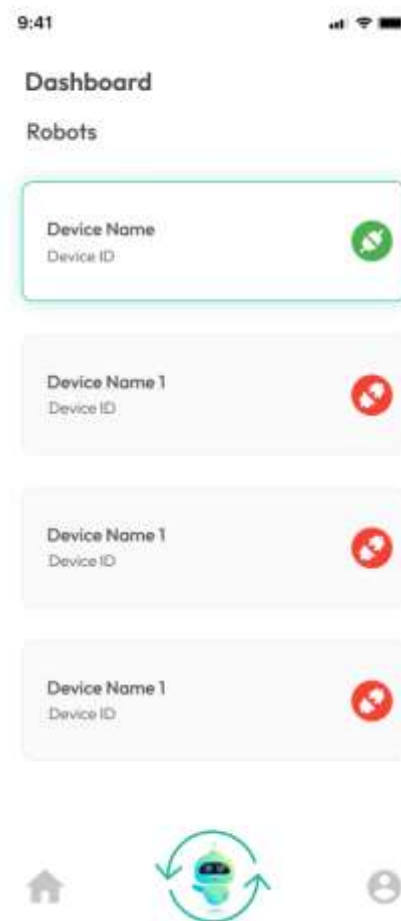
This app syncs all the Robots available in the premise. This solution had primarily two roles:



- Admin: Admin user can add new Robot within the App framework and create the users.
- User: User can control the Robot.

Features for Admin:

- Add Robot: Any new Robot has to be first added by the Admin to be available for the Users. As each Robot is normally identified by their unique id, it is difficult for a user to identify the Robot with that id. So Admin can give each Robot a nick name which helps to recognize specific Robot.
- Add User: Admin can add new user who can access the App to control the Robot.



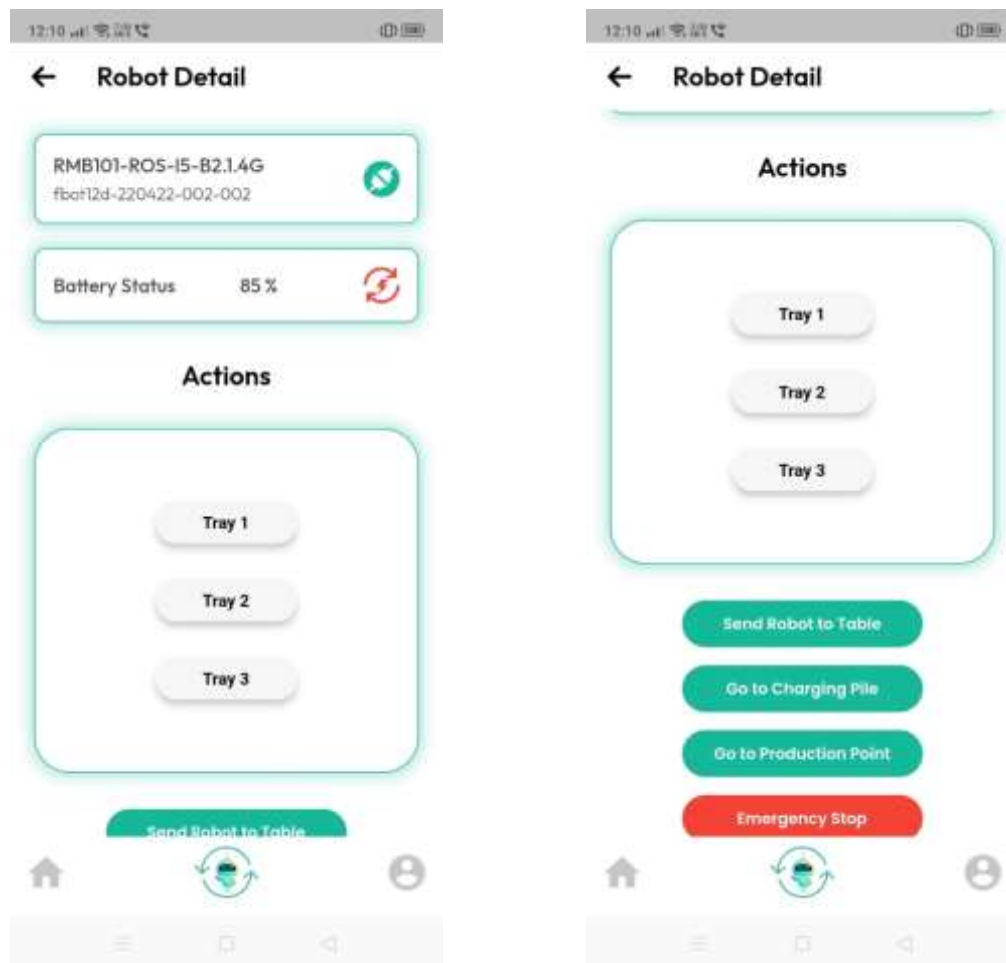
Features for User:

App user can perform below functions using mobile app:

- See list of all the Robots available in the premise
- Connect / disconnect Robot with the app
- Select table number for each of 3 food trays



- Send Robot for food delivery
- Send Robot to the kitchen
- Send Robot to the charging station
- Abort the current operation of the Robot
- Check the battery status of the Robot
- Emergency stop which stops the Robot abandoning all current commands



[View Robot Application in Action](#)