

# Smart India Hackathon 2020



PR424 - Team *Revenger's*

By Mentor : Miss Priyanka Bamne

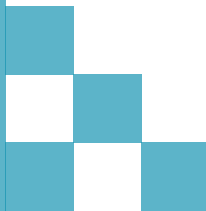
SPOC : Mr. Rajesh Dhakad

1. *Abhishek Singh Baghel*
2. *Ajinkya Taraneekar*
3. *Deeksha Soni*

4. *Mahak Mandelecha*
5. *Ritik Gandhi*
6. *Ritik Nandwal*

# 1

## The Problem





## Problem Statement

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Mobile app for sharing or pooling of transport for agricultural produce to market.


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# Abstract



With the increase of environmental concerns and the congestion of roads, truck pooling has gained a lot of popularity when it comes to environment-friendly and cheap ways of travelling. Truckpooling will reduces pollution since we have less heavy trucks on the road. It's also economic since the travel expenses are shared among the riders.

The main objective of the work presented throughout this report is to develop an enterprise-class server that represents the backbone of the application and ensure its compatibility with multiple platforms including Android and iOS



# Features

## Location Independency

Location independent application should work everywhere in the world.

## 2 mode of booking

Quick booking and pooling.

## Language Independency

Translation / Transliteration of whole app based on user preference.

## Tracking

Live tracking system and SMS and local notification alerts.

## Payment

Cash on Delivery with OTP verification.

## Dark Mode

Enabling dark mode interface to avoid eye problem during driving.



# 2

AppFlow



DRIVER/SUPPLIER

abc



LANGUAGE  
SELECTION

REGISTRATION

1



DOCUMENT  
VERIFICATION



SHORTEST PATH



MARKET

5

4

TRUCK LOADED



2



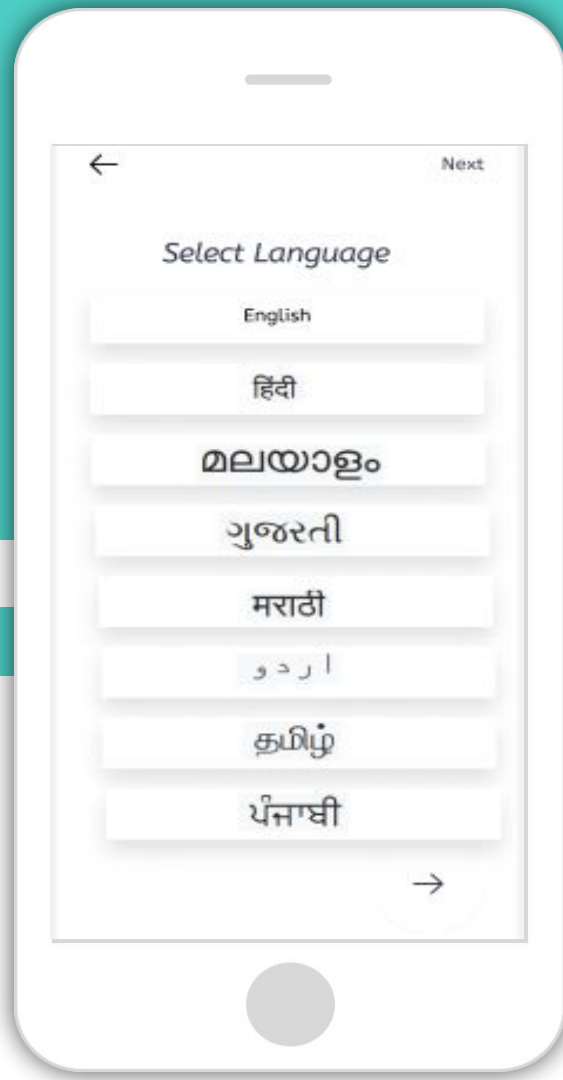
3

TRUCK BOOKED



FARMER

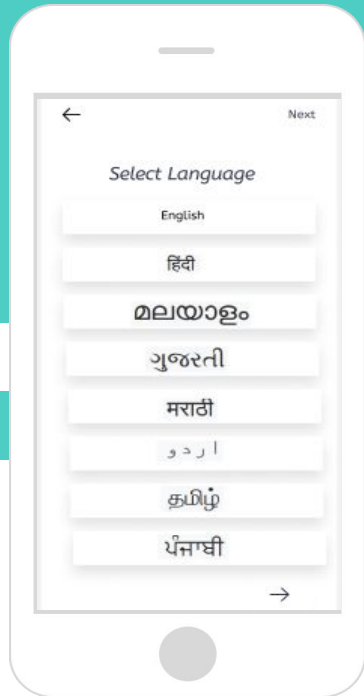
FARMER RAISES A REQUEST  
WITH CAPACITY , TIME ETC.



# Language Selection

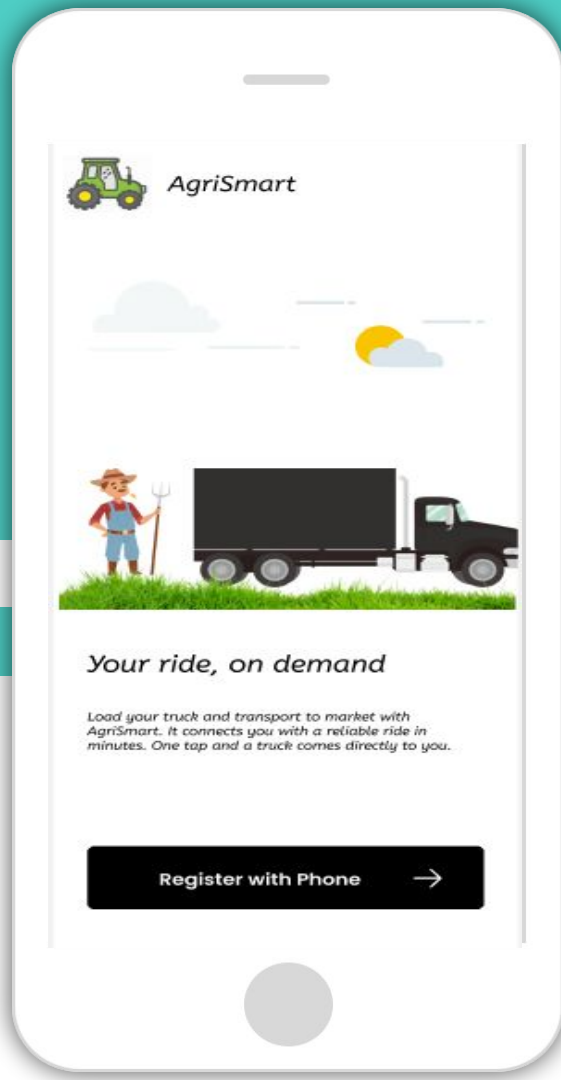
- The farmer enters the app, and select the language he/she prefers.
- The language which farmer will select will convert the app into that particular language.
- This will ensure there is proper communication between app and the farmer.
- Moreover, preferred language can be change later, in settings.





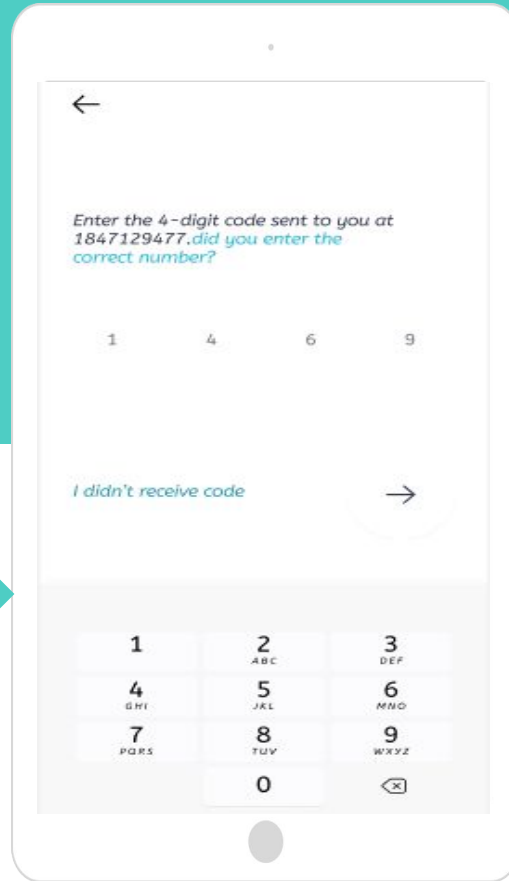
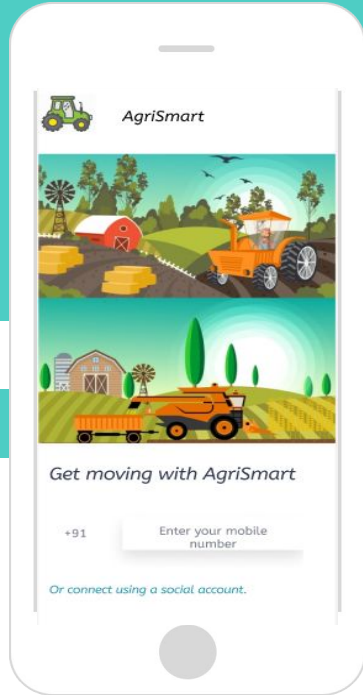
## Example of Language selection

- Here, is an example if Farmer select Hindi as preferred language.
- So, the whole app will now, change to Hindi Language.
- This will save locally in mobile.



# Main Landing Page

- This will be our main landing page, which allow user to “Register with Phone”.
- The idea is to keep it simple, and touch the feelings of user.



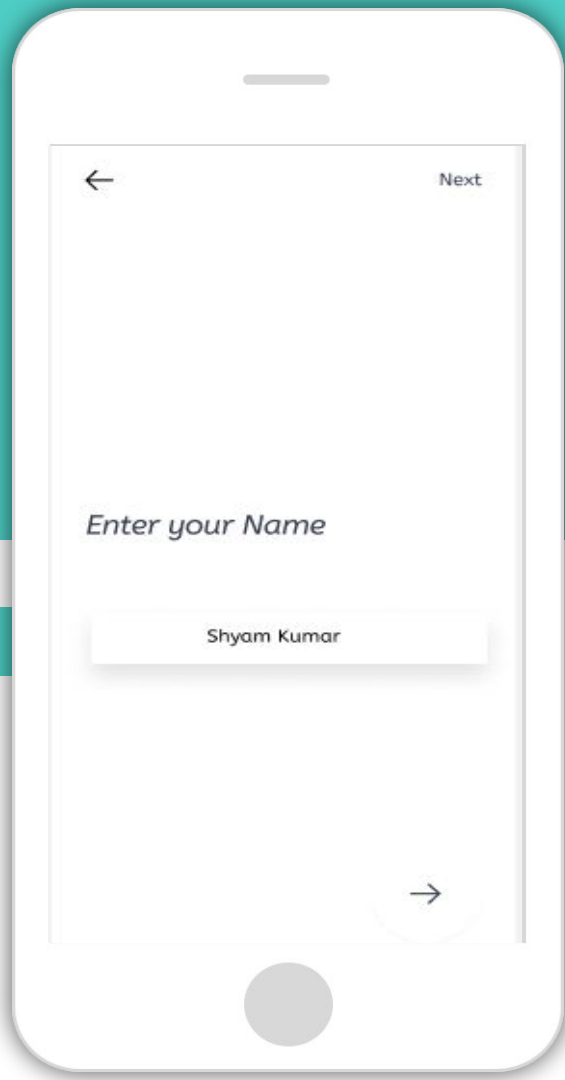
# Registering Screen

## ■ In first mobile screen.

1. Here farmer will register with number.
2. Once register, the user will get OTP, on there registered mobile number. Mobile number is stored in MongoDB as root of the user.

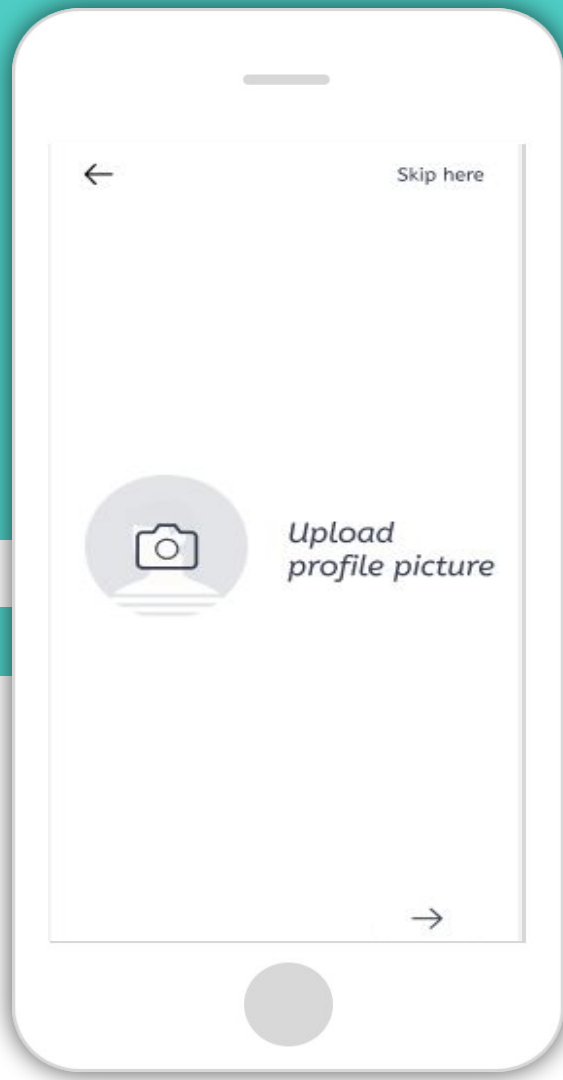
## ■ In second Mobile Screen

1. The OTP given now will auto detect by the app, or the user have to enter the OTP manually.
2. Here, if farmer didn't give the correct mobile number he can change it, and it has to resend code option too.



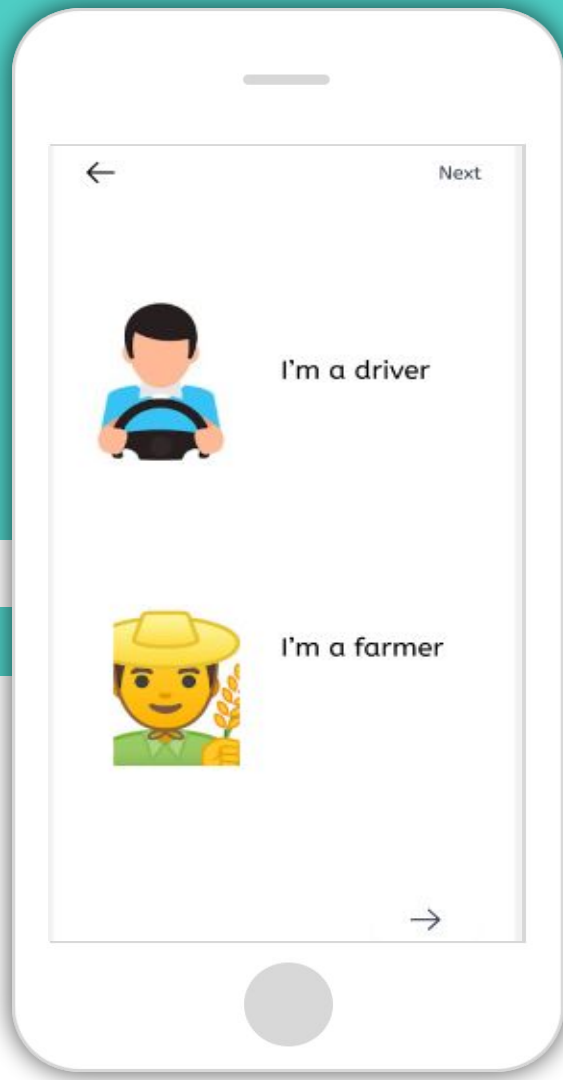
## Registering Screen (Contd.)

- User need to enter his name.
- This will be stored in under name\_field in MongoDB.



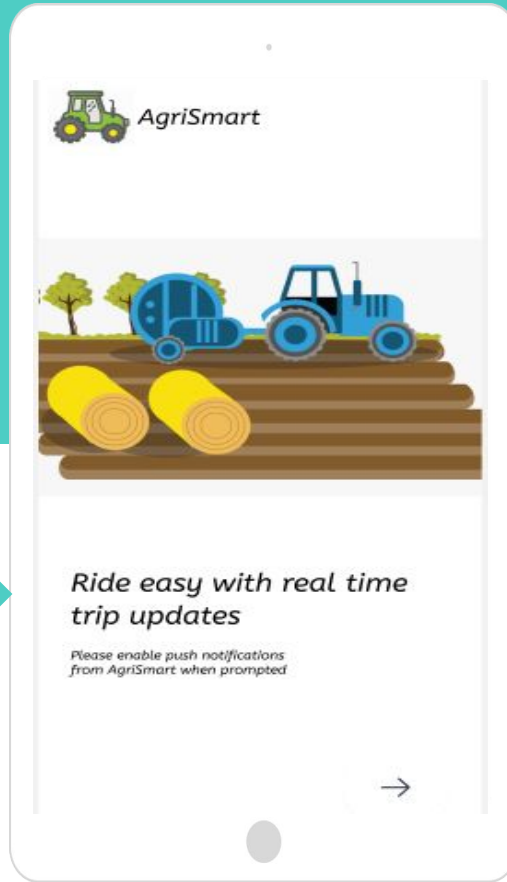
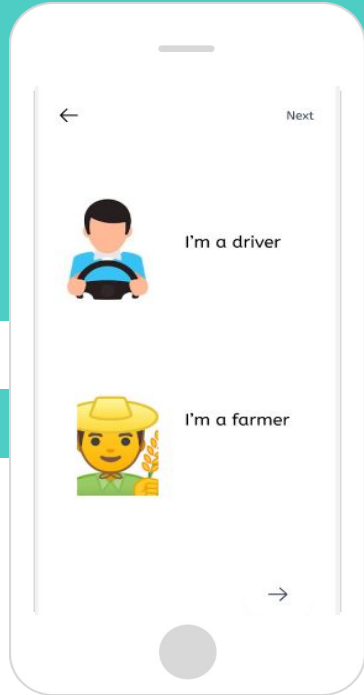
## Registering Screen (contd)

- User need to add his/her profile picture for easy identification.
- This will be stored in under profile\_pic\_field in MongoDB.



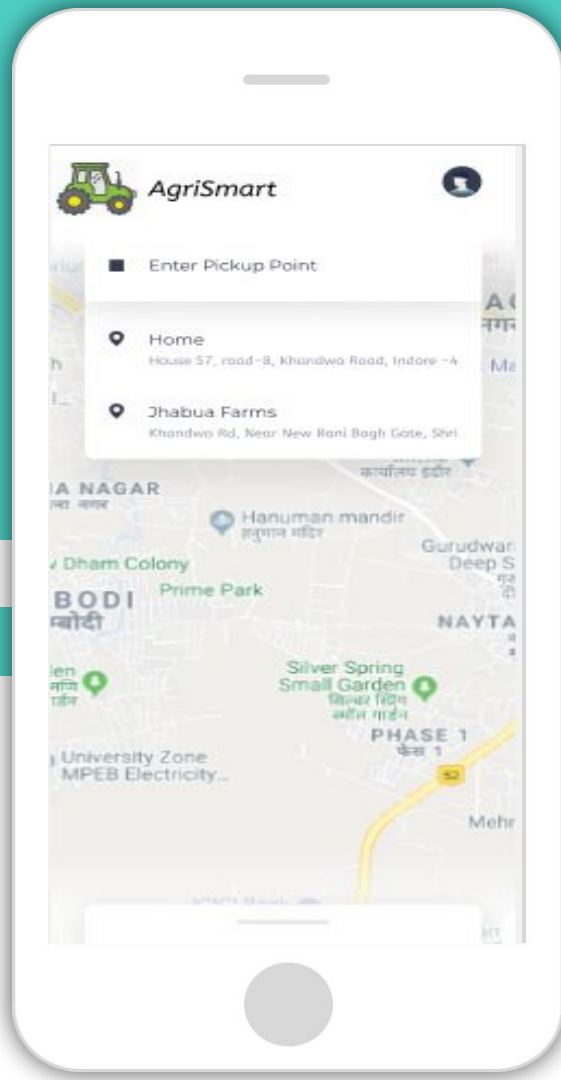
## Choosing Mode

- User need to choose mode, if a farmer already has a truck and is travelling to take his good to the market, he should choose driver mode, to see other option for pickup, else choose farmer mode for supplying goods.



## Farmer Mode

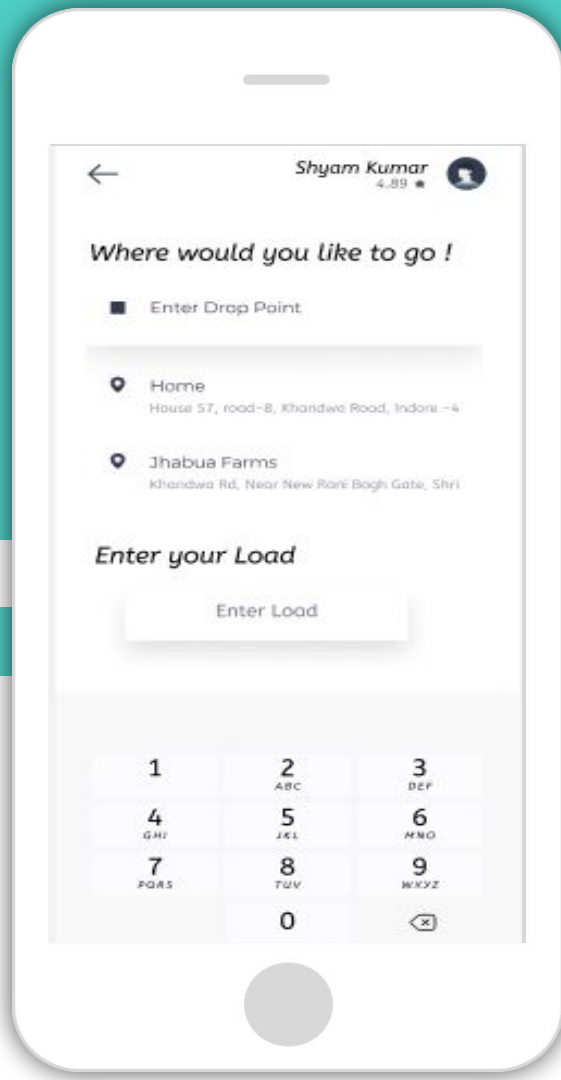
- If user chooses farmer mode he will land on this page for further process.



## PickUp Point

- The User can enter his/her pickup point.
- A menu will shown to help user to choose from that list.





# Drop Point and Load

- The Farmer needs to enter its Drop Point and Capacity of Load which needs to be supplied.
- Next farmer can choose the type of trucks available for supply.

# Mode of Booking

## Quick Booking

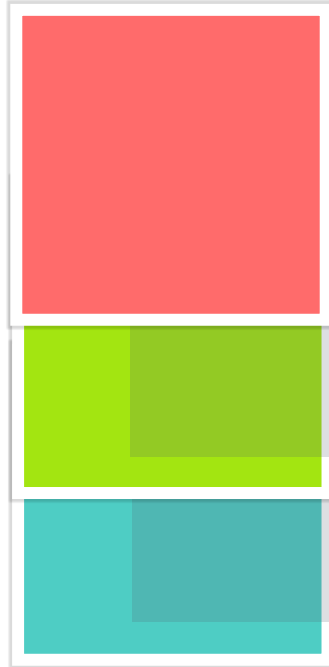
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In quick booking, farmer can quickly book with nearest driver available

## Quick Booking (For Driver)

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In quick booking, driver if going somewhere, can enter details, than quickly pick up a farmer request if available.



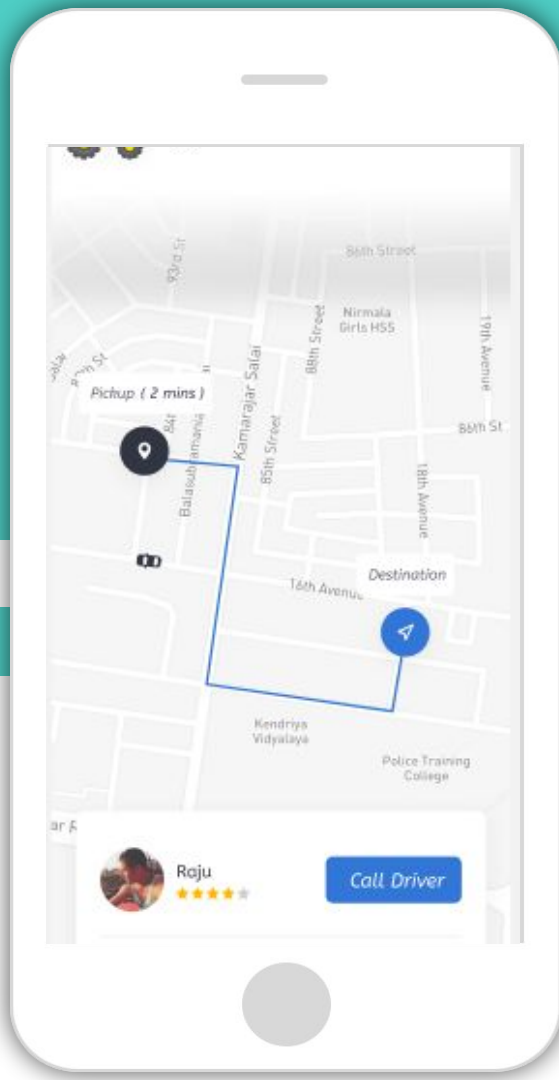
## Pooling

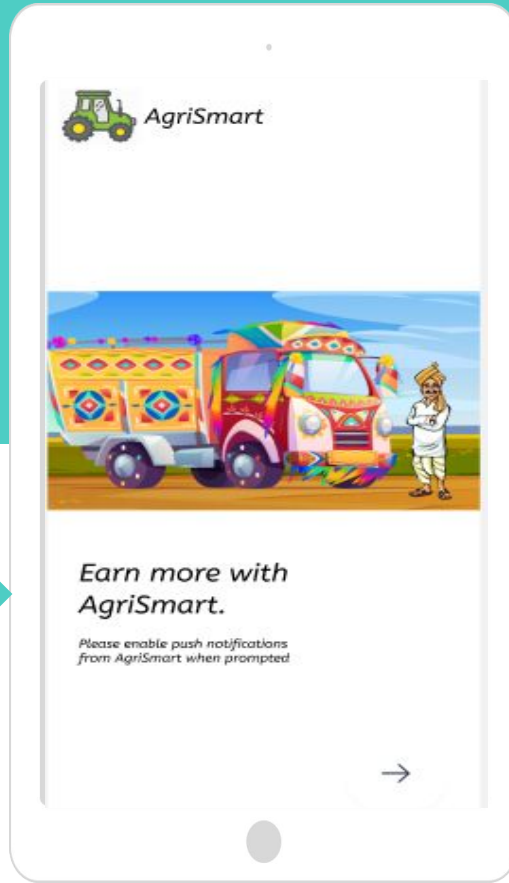
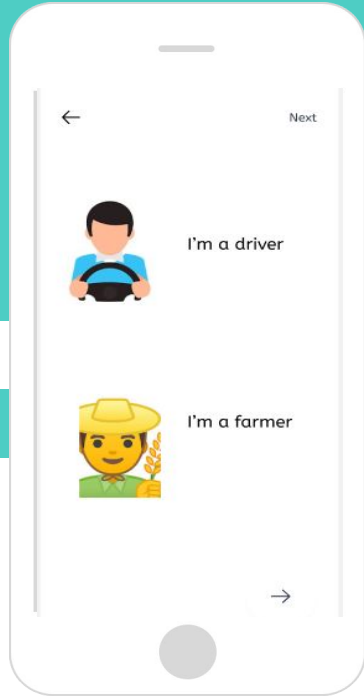
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In pooling, a request will be made and at 11:59 pm of that day, a scheduler will run, a pooling function will run. This will map farmers with driver.

# Payment and Final Booking Option.

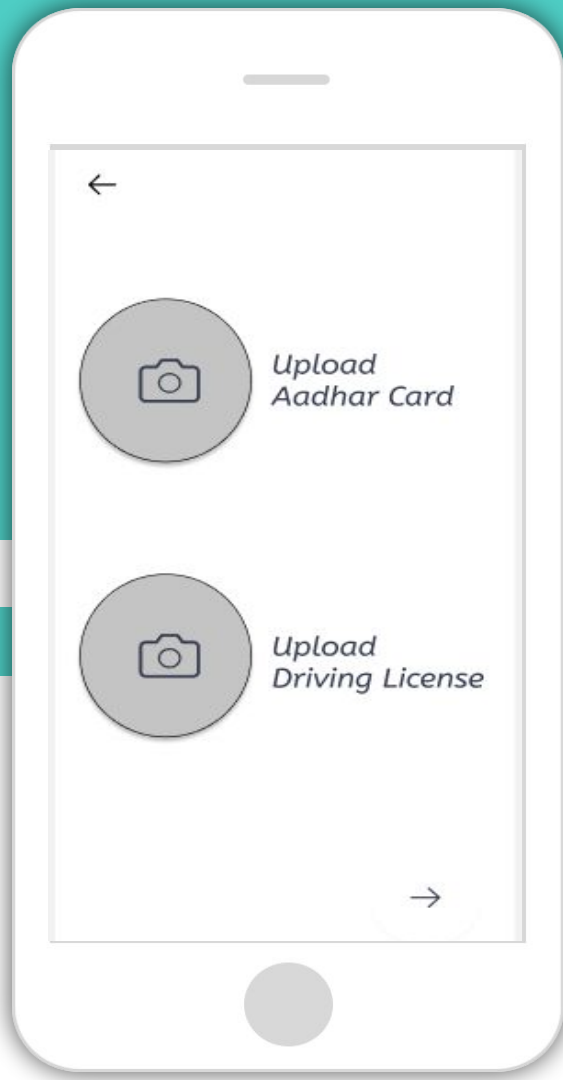
Driver details will be shown, with a feature to call driver, and a permanent OTP to be given to driver for final verification.





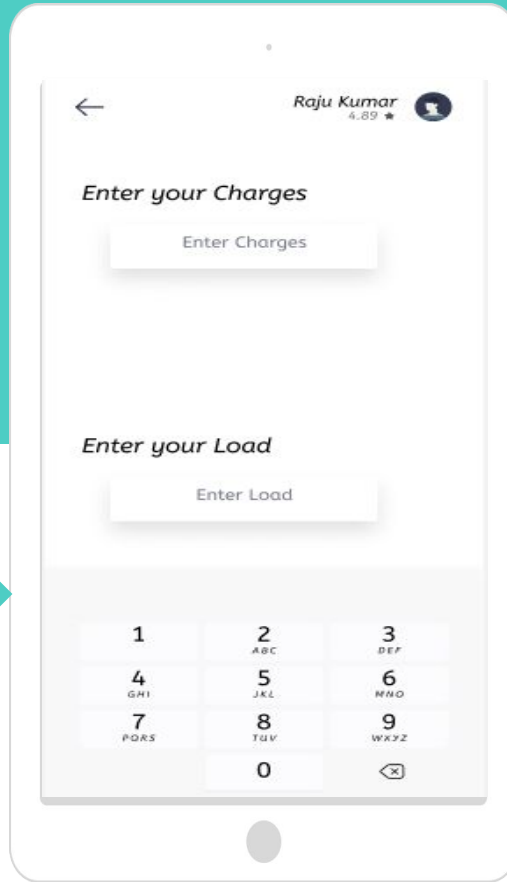
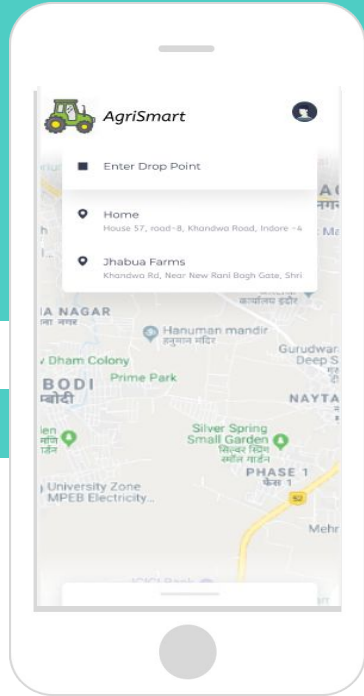
## Driver Mode

- If user chooses Driver mode he will land on this page for further process.
- This will be stored in under mode\_field in MongoDB.



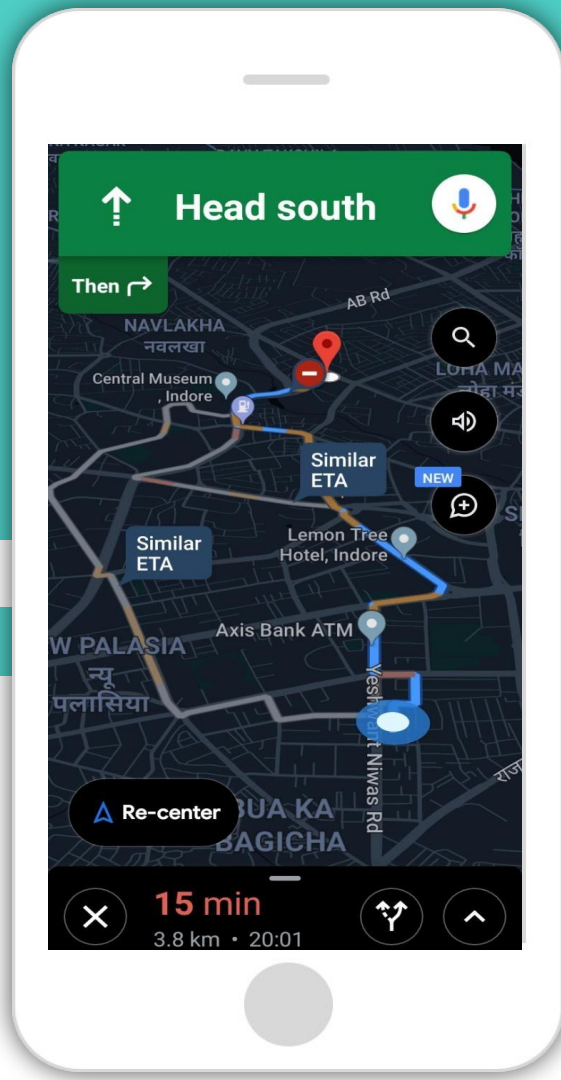
# Registering Aadhar and Driving License

- User will capture Aadhar card photo this photo is saved in MongoDB database.
- Similarly, User will capture Driving Licence photo this photo is saved in MongoDB database.
- This will cross verified by adding aadhar number directly.



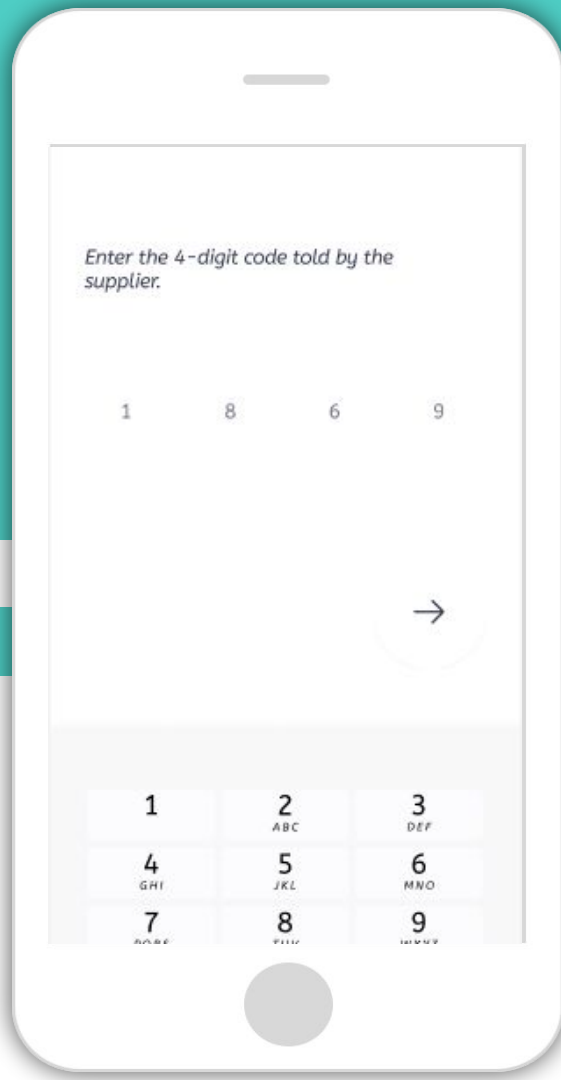
# Drop Point and Available Load

- If the Driver is already going to his preferred location, he needs to enter its Drop Point and Capacity of Load which needs to be supplied.
- His/her charges will be given according to government norms.



# Navigation

- We Took the “3-Foot-1-Second” Rule: drivers are looking at a smartphone-sized screen from about three feet away, for about one second at a time. This means that “glanceability” and “tappability” are priorities.
- For gestures, we wanted drivers to have freedom, but also minimal need to interact while driving.
- One of our essential new navigation features is Night Mode. Many truck driver drives at night, and sometimes for hours at a time. The default day settings can cause eye-strain as a driver readjusts from the bright screen to the dark streets outside. Night Mode protects drivers from light pollution that would otherwise be a real ergonomic and safety hazard.



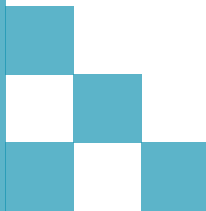
# Verification of OTP and Payment

- Once driver is confirmed farmer will get Driver's details. Along with an OTP, so the truck driver could be easily verified with.
- After farmer is sure of goods being reached to location he can pay him using cash on service. This will generate bills, at both driver and farmer mobiles.



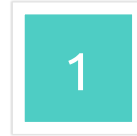
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## Technology Stack



# Technology Stack

## Frontend and UI Development



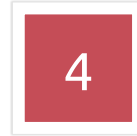
IDE – VS Code/Android Studio



Build System – Gradle



UI Designing – Figma



Framework - React Native

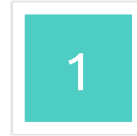


App Compatibility – Android and iOS

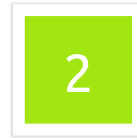


# Technology Stack

## Backend and Database Management



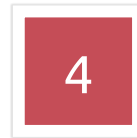
IDE – VS Code



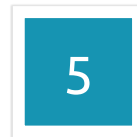
Database – MongoDB



TextLocale API for SMS



Node JS + Express

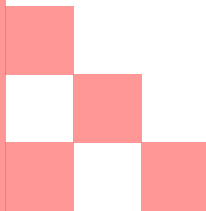


Google Maps API



# 5

Future Scope



# Future Scope

## Agriculture + Machine Learning

Old days of hard and not always profitable human labor is over, Smart Farming powered by Machine Learning with its high-precision algorithms is a new concept emerging today. Aiming to increase the quantity and quality of products, this cutting-edge movement makes sustainable productivity growth for everyone working in the agriculture realm.

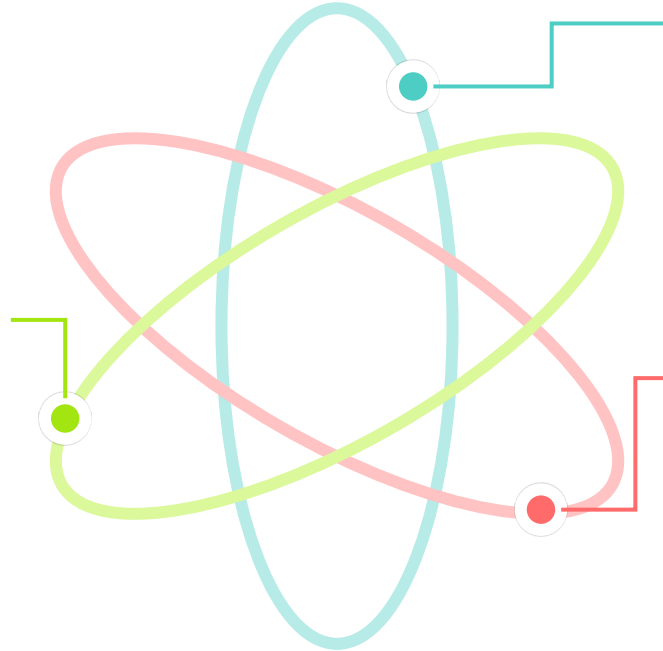
## Decentralising the App

Decentralising the App, will increase security and community driven app, rather than a firm. Due to which the data is more secure now, and Driver salary also get increase.

## Making Powerful Chatbot

Intelligent bots have become extremely popular. More websites are writing about chatbots and intelligent agents and advancing varied (and conflicting) opinions on best practices.

This intelligent bot will help to reduce strain in offline mode with less api costing.



Thank You

