

## Team Spectra

Development of Car Pooling App for reducing carbon footprints

### Industry Name:

Samsung R&D

### Problem Statement:

Build a smartphone app that helps you to car/bike pool, compare and compete with your friends on the carbon footprint of the travel with multiple add-on features.

### Problem Statement ID:

SS2

### Technology Bucket:

Software- Mobile App Development

### Team Members:

Arghyadeep Das (**Leader**)

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### College Code:

EN-3181

## Solution:

We propose the development of a smartphone app that is aimed at encouraging car-pooling in India, in a fun and interactive way through gamification (because games are dopamine releaser) whereby you can compete with your friends, family and locality on the basis of carbon foot print reduced. The users can earn badges on the basis of their goals reached. The app can automatically detect the carbon footprint of the user on the basis of existing carbon footprint dataset, his/her mode of transport for commute, distance and duration, will infer other necessary details through GPS and also provide suggestions to user on the basis of his preferred mode of transport. We also aim to add an in-app chat system for communicating with the car-pooler and other passengers for easy scheduling and notifying important changes. It will also have an emergency mode, which when triggered, will send the real time location and audio clip of next thirty seconds to the nearest police station.

## Technology Stack:

Web Technologies (for handling front end and back end)

Android / React Native (for development of app)

GCloud/AWS Cloud Service (for handling low traffic)

REST API and GMaps API (for real time location)

Google Play Services API (for gamification)

## Use Cases:

1. The app will allow users to car pool with only verified car poolers. They will also get to see the driver ratings based on user feedbacks. The users can see ratings of the driver before booking for car-pooling.
2. The app will be able to determine the carbon footprints automatically on the basis of mode of travel, distance and duration and also collect other necessary information through GPS.
2. The app will give user the power to decide who can be connected to them. This approach is taken for safety of users. Each user will have a unique ID that he/she can send to his/her family and friends or simply scan QR code.
3. The user will get recommendations on the types of public transport that's available near him/her if public transport is the default mode of transport or no car pooler is available at that time slot.
4. Since customer safety takes top priority, it will have an emergency mode for users which when triggered, will send real time location and audio recording of next thirty seconds to the police.
5. The user will be able to check his carbon footprints and share on social media to encourage other friends to beat his/her record, which will lead to a healthy competition to reduce carbon footprints as much as possible.

## Dependencies/Show-Stopper:

For better results, the presence of dataset on Indian Carbon Foot Print statistics is necessary. We can also provide money based incentives (via Samsung Pay) for people reaching their goals so that they keep coming back and keep the user base engaged to the app. Further development and backing of project will allow us to provide aforementioned things to encourage more people to participate in reducing carbon footprints. Also, cloud hosting for large traffic is monetized.