WELCOME

SAFAI by Team-101

SAFAI

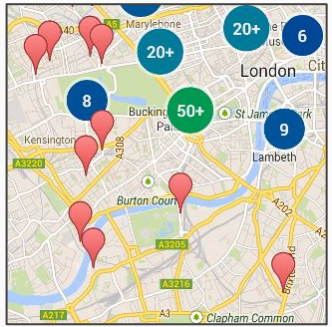
- SAFAI is a full stack solution to waste management problems that are emerging these days in metro cities.
- It aims to optimise the waste collection and management systems of the evolving “smart cities”.

FEATURES....

Garbage Pickup Optimised

Optimised garbage collection techniques reducing the cost.

1



Request dustbin

Found a place with trash but no trash bin? Request on the app and we'll deploy one

4

Smart Bins

Smart Bins will tell automatically if they are full or not. If full, they will be picked first.

2

3 Dustbin Nearby

New to a locality and seeing no place to dump your garbage, just use this feature to find one.

Waste Identification

Capture image to identify different kinds of waste

5

The Problems

- Ineffective allocation of trucks in localities, non regularity of pickup trucks.
- Most of solid waste management budget is allocated to collection and transportation, leaving very less for processing waste collected in landfills.
- Lack of motivation to separate the waste into recyclable and non recyclable.
- No way to dispose off large waste

Garbage Pickup Optimised

- Our app will provide users the facility to call for trash pickup truck whenever required.
- Users will deposit their trash to the collection boy in two separate bins, recyclable and non recyclable bins. The user will be given incentive based on the weight of recyclable waste he/she deposits and the type of recyclable waste. Users who on the other hand are earning incentive will help us save our labour in separating the trash into recyclable and non recyclable.

- Waste collected on days of parties/marriages is huge in amount. User can schedule a pickup next morning.
- Garbage pickup trucks' paths have been optimised, to navigate to only the nearest places where bins are located. We achieved this by Clustering the locations of Trash Bins on Google Maps.

localhost:5000/getPredictedClusters - Google Chrome

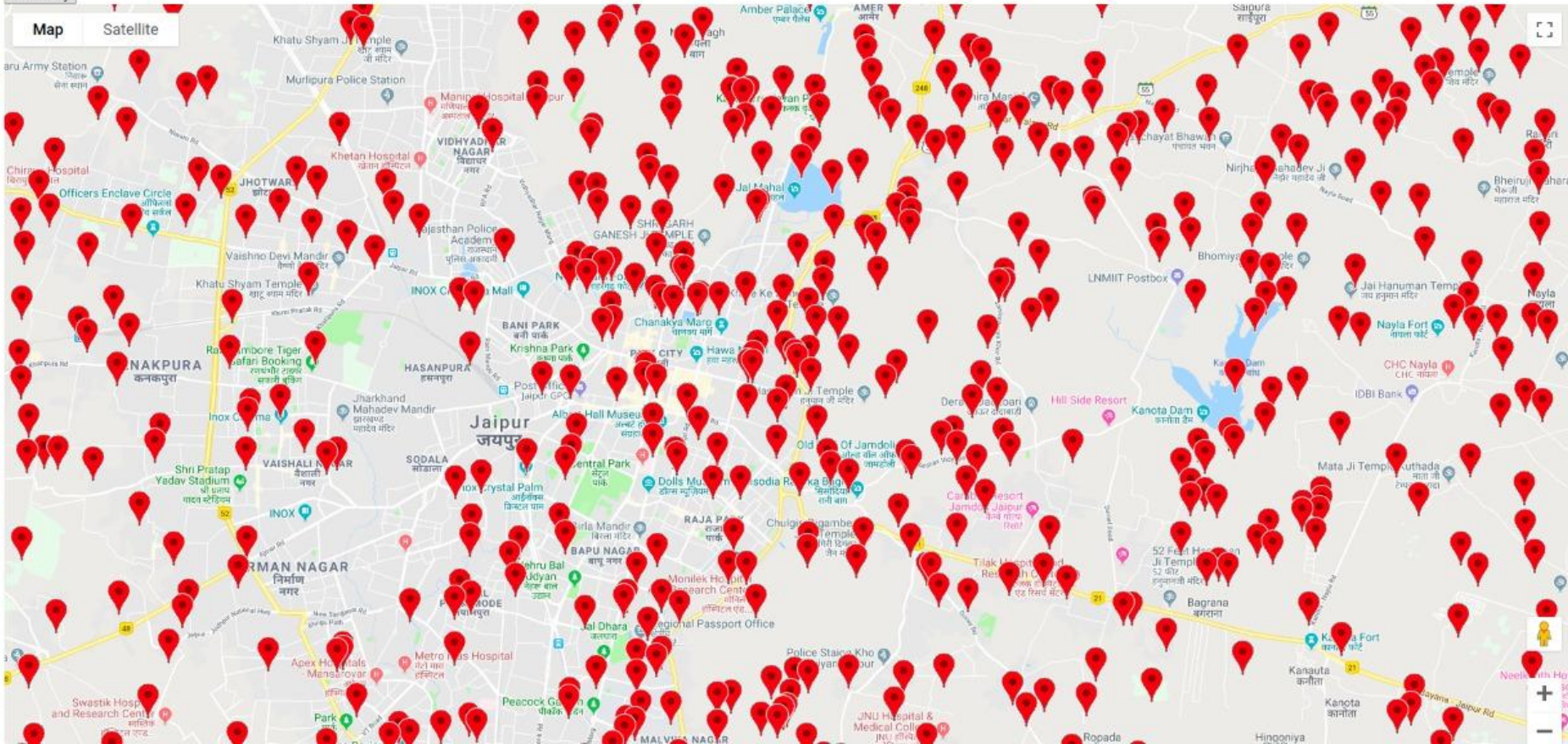
google maps | javascript - G | Developer G | https://maps | New Tab | Signup and A | android - SHA | jQuery | Hello, Beacon | Beacons | Go | localhost:500

localhost:5000/getPredictedClusters

Apps For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...

Smart Bins

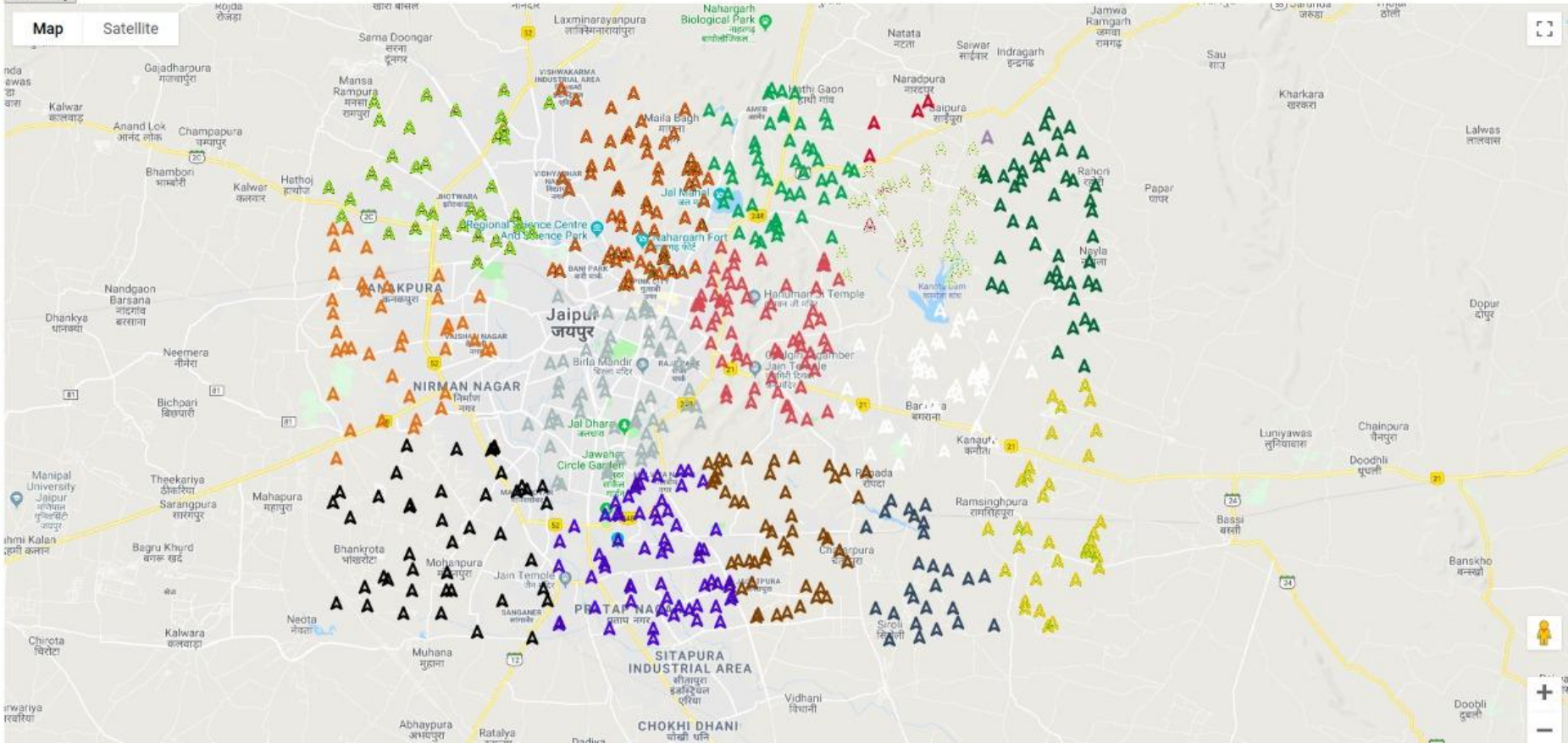
RouteAway

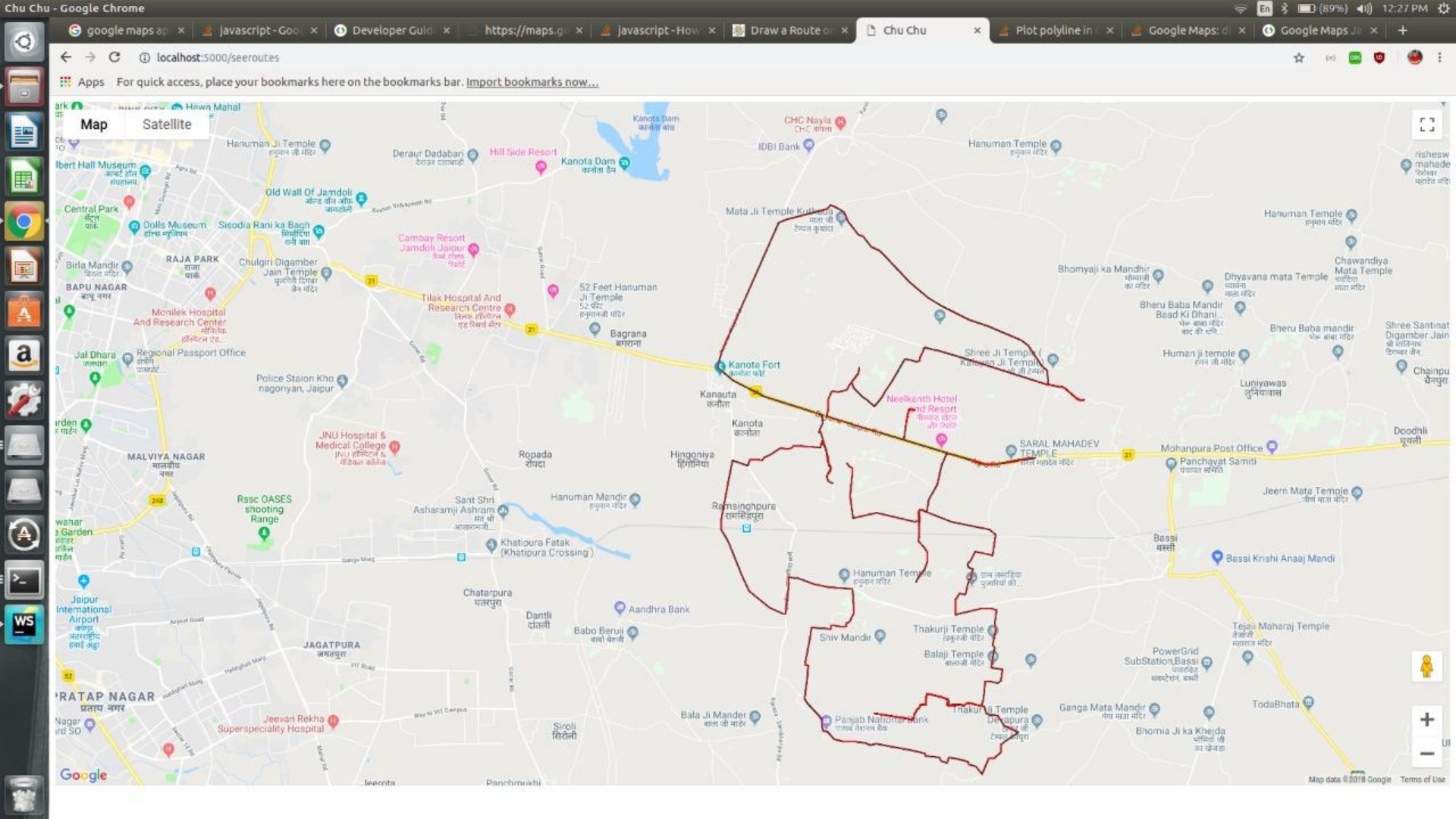


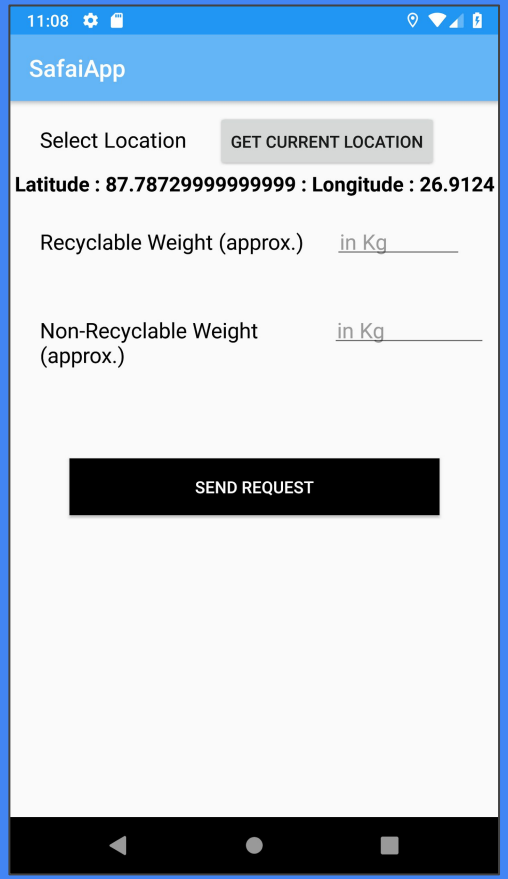
localhost:5000/getPredictedClusters - Google Chrome
11:17 AM
google maps | javascript - G | Developer G | https://maps | New Tab | Signup and A | android - SHA | jQuery | Hello, Beacon | Beacons | Go | localhost:500
localhost:5000/getPredictedClusters
Apps For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...

Smart Bins

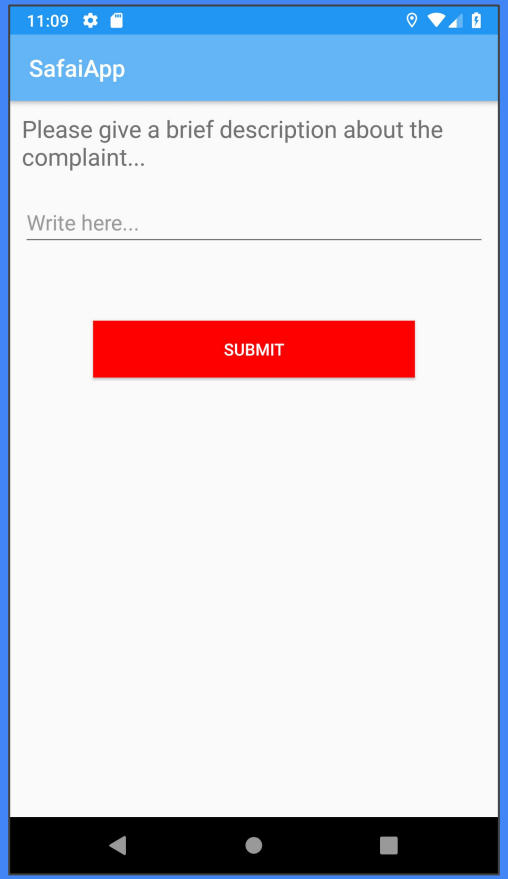
RouteAway



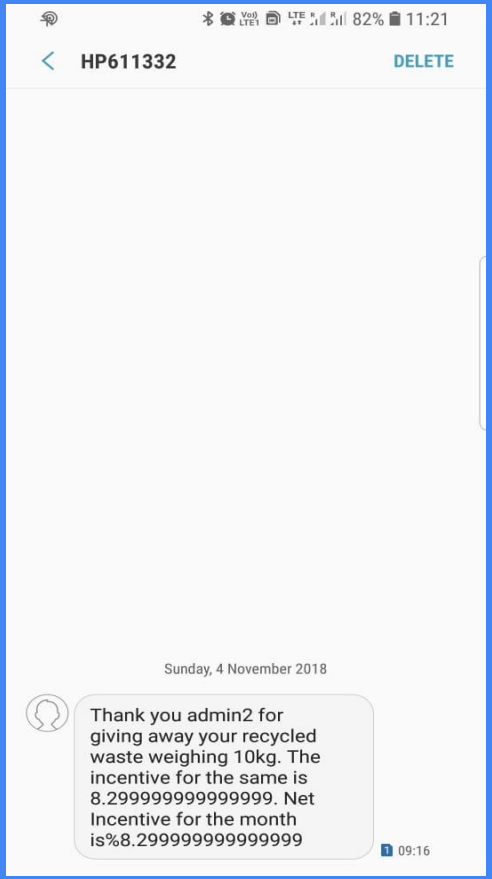

Chu Chu - Google Chrome
google maps ap
javascript - Goo
Developer Guid
https://maps.g
javascript - How
Draw a Route o
Chu Chu
Plot polyline in
Google Maps: d
Google Maps Ja
localhost:5000/seeroutes
Apps
For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...
Map
Satellite
Hawa Mahal
Hanuman Ji Temple
Deraur Dadabari
Hill Side Resort
Kanota Dam
CHC Nayla
IDBI Bank
Hanuman Temple
Old Wall Of Jamdoli
Central Park
Dolls Museum
Sisodia Rani ka Bagh
Cambay Resort Jamdoli Jaipur
Mata Ji Temple Kuthada
Hanuman Temple
Birla Mandir
RAJA PARK
Chulgiri Digamber Jain Temple
BAPU NAGAR
Monilek Hospital And Research Center
Tilak Hospital And Research Centre
52 Feet Hanuman Ji Temple
Bagrana
Bhomyaji ka Mandhir
Dhyavana mata Temple
Chawandiya Mata Temple
Bheru Baba Mandir Baad Ki Dhani...
Bheru Baba mandir
Shree Santinat Digamber Jain
Jal Dhara
Regional Passport Office
Police Staion Kho nagoriyan, Jaipur
Kanota Fort
Shree Ji Temple (Kalayan Ji Temple)
Human ji temple
Chainpu
Luniyawas
Kanauta
Kanota
Neelkanth Hotel and Resort
JNU Hospital & Medical College
MALVIYA NAGAR
Ropada
Hingoniya
SARAL MAHADEV TEMPLE
Mohanpura Post Office
Panchayat Samiti
Doodhli
Rssc OASES shooting Range
Sant Shri Asharamji Ashram
Hanuman Mandir
Ramsinghpura
Jeern Mata Temple
Khatipura Fatak (Khatipura Crossing)
Bassi
Bassi Krishi Anaaj Mandi
Hanuman Temple
Jaipur International Airport
Chaterpura
Dantli
Aandhra Bank
Babo Beruii
Shiv Mandir
Thakurji Temple
Balaji Temple
Tejaji Maharaj Temple
JAGATPURA
PowerGrid SubStation,Bassi
PRATAP NAGAR
Jeevan Rekha Superspeciality Hospital
Bala Ji Mander
Panjab National Bank
Thakur Ji Temple Devapura
Ganga Mata Mandir
Bhomia Ji ka Khejda
TodaBhata
Siroli
Google
Map data ©2018 Google
Terms of Use



Schedule a pickup

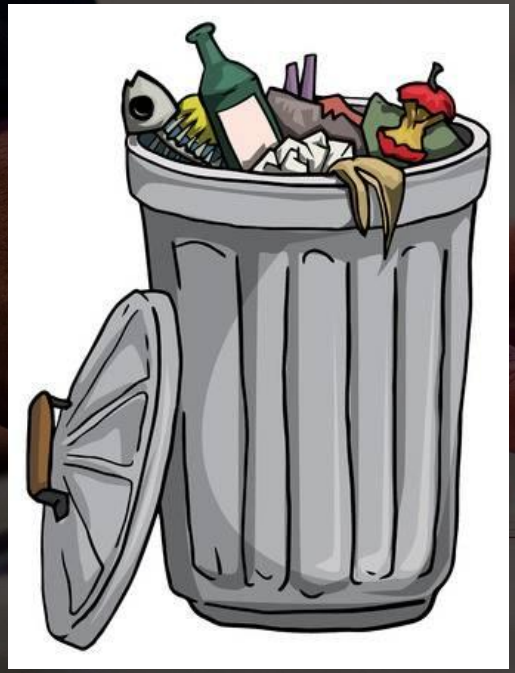


Add a complaint



Total incentives of user by SMS

Unexpected Problem....

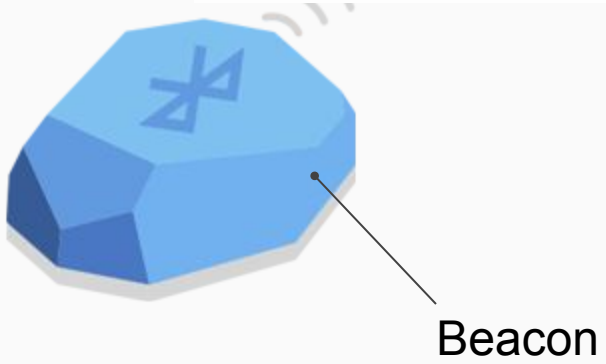


If a trash bin unexpectedly get filled up, garbage cumulates around it, leading to unhygiene around it.

SAFAI provides a full stack solution to the imminent waste management requirements

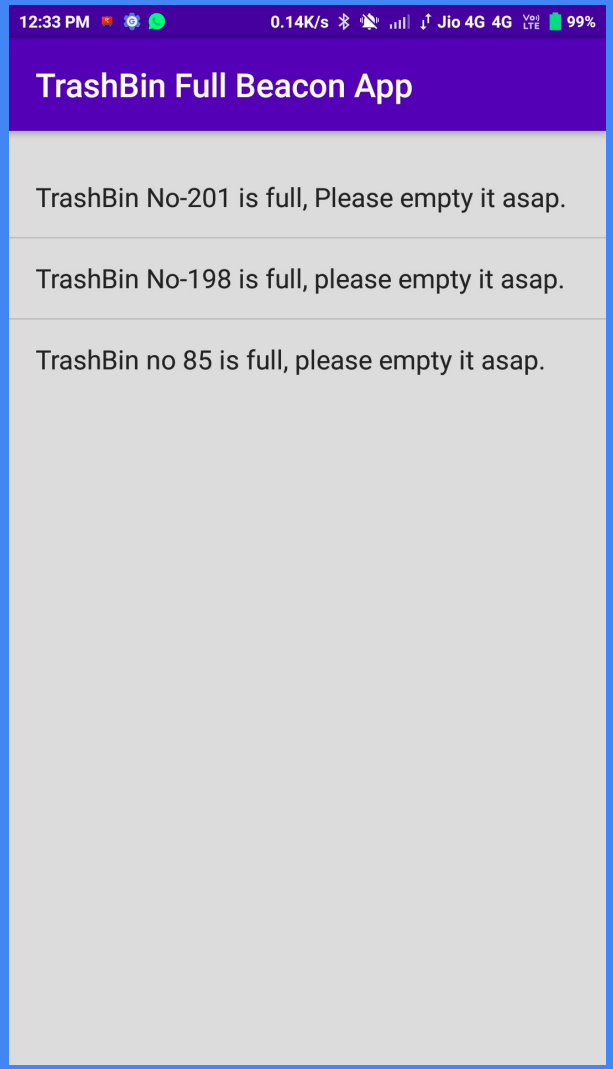
How we solved it…
(Concept of **SMART BIN**)

Dustbin fitted with Beacon, generates a response as it fills completely, calling nearby pickup trucks to empty out the bin as soon as to prevent littering outside the bin.



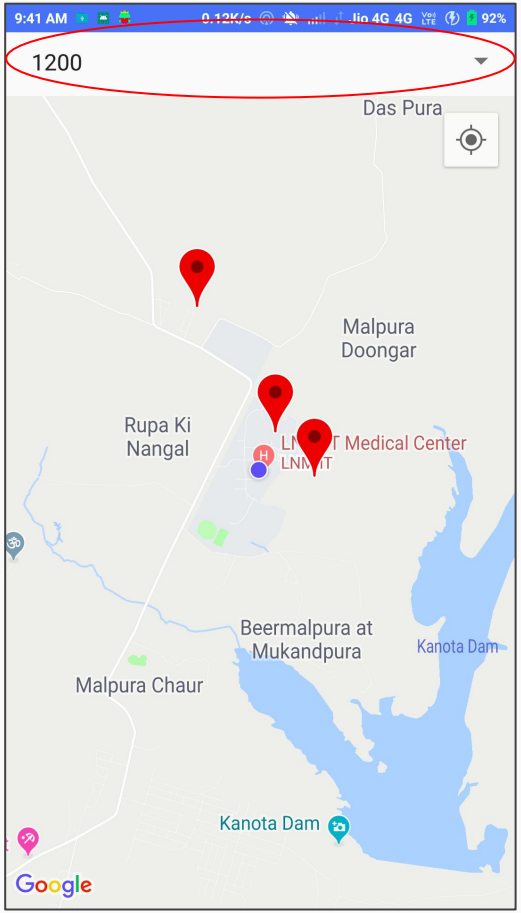
Beacon App....

This is the app for drivers. It will tell them the status of bins in their range(70 - 450m).

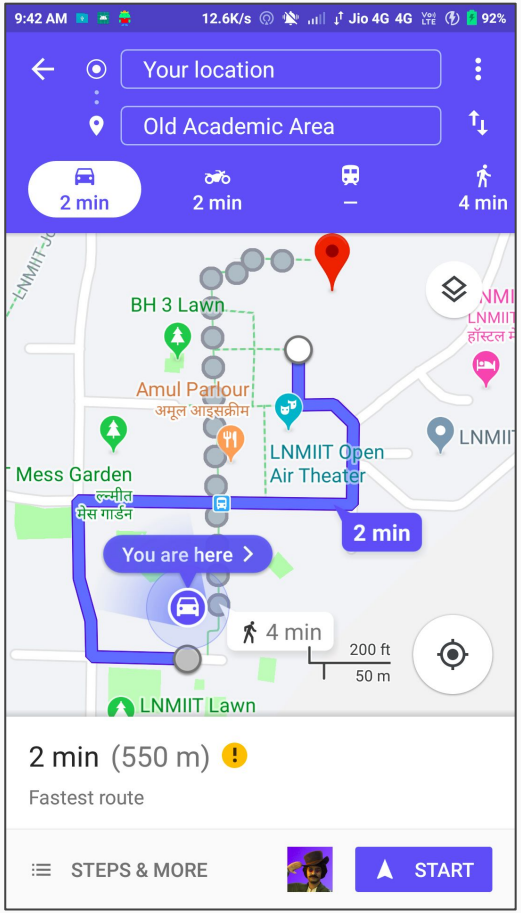


New to a Locality !!!

- The user can set the maximum radius and get all the dustbins in that radius and navigate to any of them.
- There is also a facility to add a new bin that is not present in the database.
- He can also request for a new bin to be installed at a location.



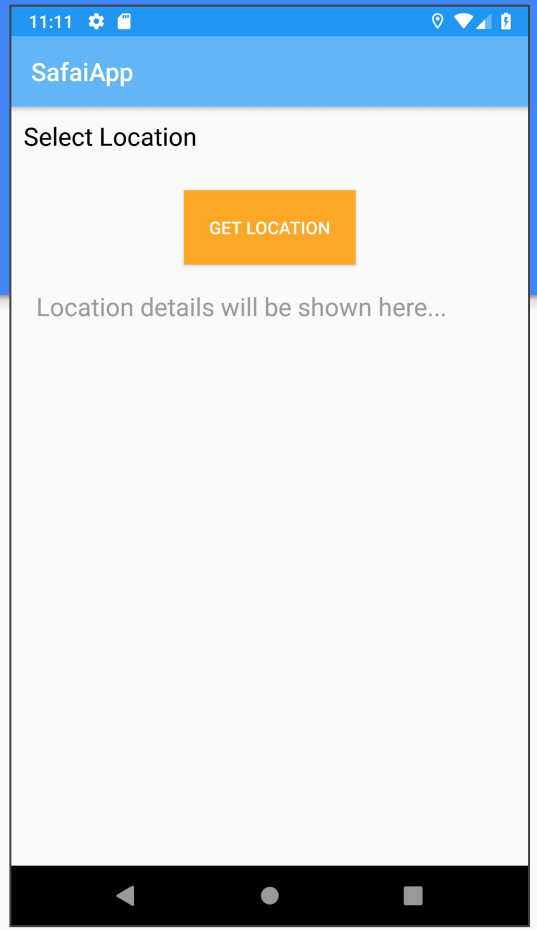
All dustbins within 1200 metres of current location.



Navigate to any one of them

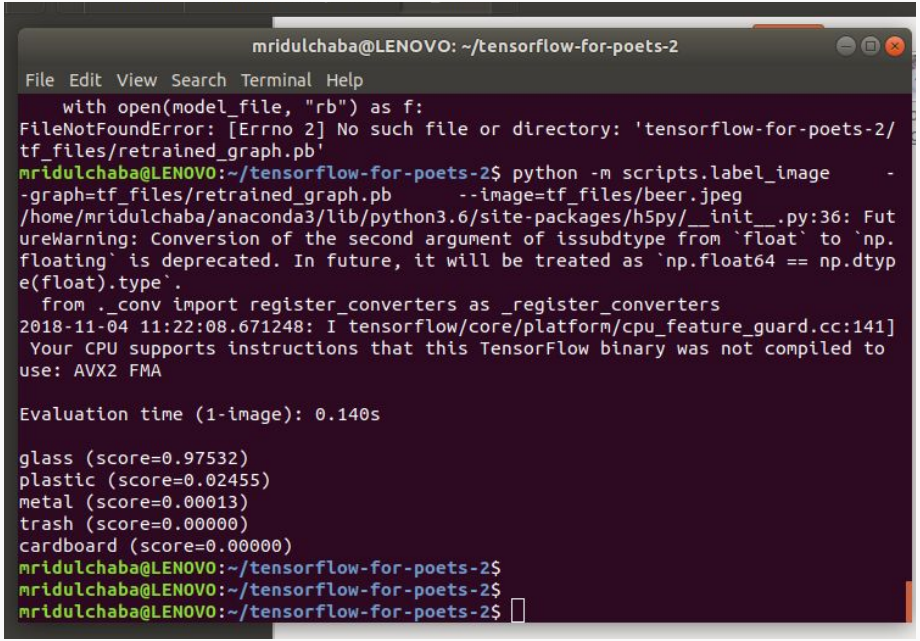
Want to request a new dustbin?

The user can make a request on the app to install a new dustbin if he thinks there should be a dustbin at his location. The request will be processed if there are no nearby dustbins around the place the user requested for.



Garbage Identification

- Classify the type of garbage that user throws in the bins. This will help us separate the recyclable waste into separate categories, for eg paper,metal, cardboard, glass etc.



Next Steps....

The following are the features we are planning to add in the future :-

- To enable real time identification of garbage through video surveillance throughout the city or major parts of city and tourists places. The amount of garbage will be calculated and if it exceeds a certain limit, the authorities will be notified.
- Design a good algorithm to give incentives to users.
- To collaborate with the local network of garbage collectors.

THANKS