



Consulting Report

Insaïd Telecom






Overview

- **Insaid Telecom** is a **India**-based telecoms company, and the second largest provider of mobile services and the largest provider of fixed telephone services in the **India**.
- It is the largest telecoms operator in the world by revenue. **Insaid Telecom** also provides technology communications through mobile, fixed, broadband and TV.

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Introduction

Feel Connected	Offering	Priority Markets
		
<p>Insaid Telecom is always keen to provide services customized to their client needs.</p> <p>Businesses try to understand the behavior and adjust their offerings so as to ensure clients feel attached to their services.</p>	<p>Insaid Telecom, one of the leading telecom players, understands that customizing offering is very important for its business to stay competitive.</p> <p>Currently, Insaid Telecom is seeking to leverage behavioral data from more than 60% of the 50 million mobile devices active daily in India to help its clients better understand and interact with their audiences.</p>	<p>This consulting report, is focused on priority Markets India (WestBengal, Karnataka, Gujarat, Bihar, Punjab, Kerala) for 2020 business plan of Insaid Telecom.</p>

Project Description

1.

Insaïd Telecom is always keen to provide services customized to their client needs.

Businesses try to understand the behavior and adjust their offerings so as to ensure clients feel attached to their services.

2.

Insaïd Telecom, one of the leading telecom players, understands that customizing offering is very important for its business to stay competitive.

Currently, **Insaïd Telecom** is seeking to leverage behavioral data from **more than 60% of the 50 million** mobile devices active daily in India to help its clients better understand and interact with their audiences.

Strategy towards Problem Statement

Insaid Telecom are looking after solution for below parameters:

Demographic Profile

Which
Gender / Age to Target?

Regional Profile

Which
State / City to Target?

Marketing Activity

Communication and Media
planning

About the data source

Getting Data:

- Download the DataSets for **events_data** from : [events_data.csv](#)
- Download the DataSets for **gender_age_train** & **phone_brand_device_model** onto Python by connecting to the MySQL instance based on given credentials.

Event_Data

- Variables:
 - Device_ID
 - Event_ID
 - Timestamp
 - Longitude/Latitude
 - City
 - State
- **Observations: 3252950 (All India)**
- **Observations: 422971 (Priority 6 States)**

Gender_Age_Train

- Variables:
 - Device_ID
 - Gender : Male/Female
 - Age
 - Group
- **Observations: 74645 (Total)**

Phone_Brand_Device_Model

- Variables:
 - Device_ID
 - Phone_Brand
 - Device_Model
- **Observations: 87726 (Total)**

Summary of the data mining

Our consulting team focused on the priority markets - West Bengal, Karnataka, Gujarat, Bihar, Punjab, Kerala to study the user's behavior based on :

- Mobile usage
- Geolocation
- Demographic profiling
- Mobile device

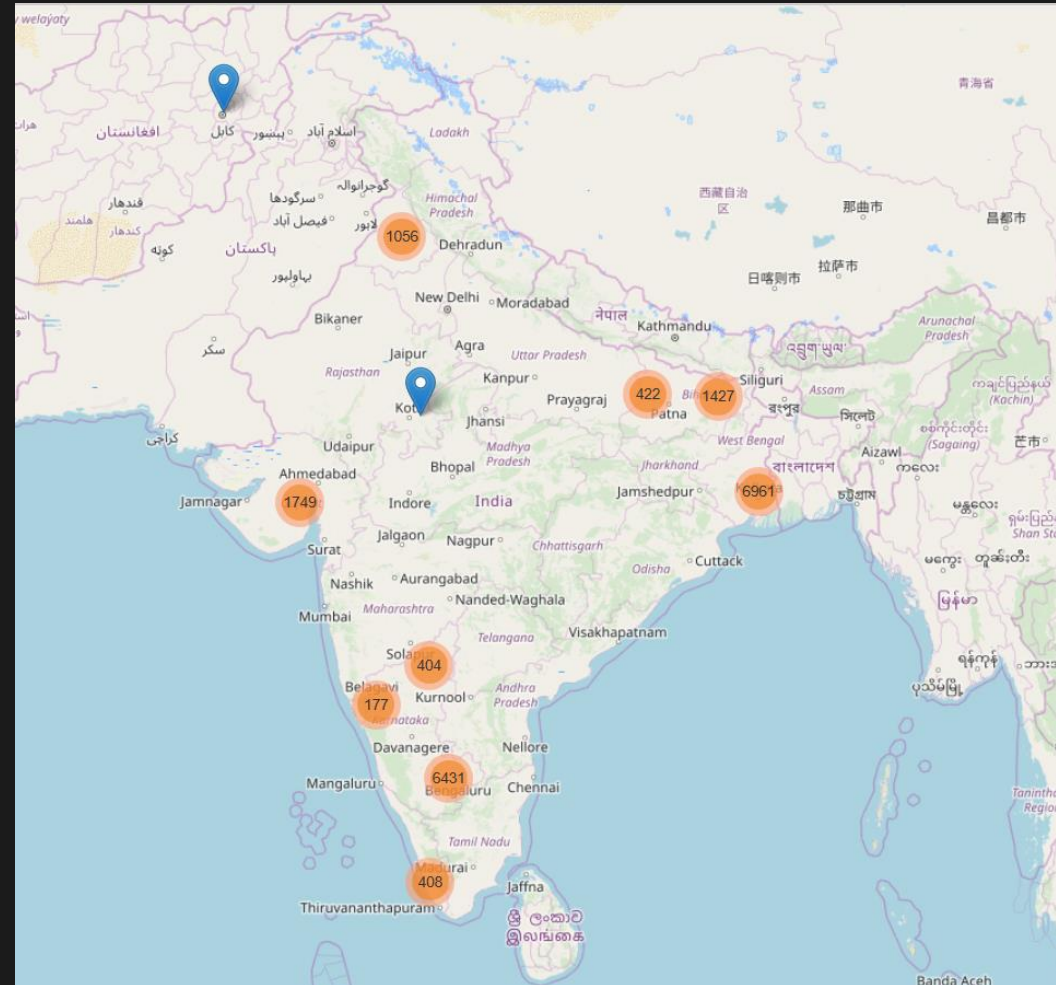
As per the study need and observations on the above-mentioned parameters; we have cleaned and purified the data to extract useful insights and knowledge to identify the business opportunities in the focused markets.

Summary of the data mining

Profiling by state :

- [Punjab](#)
- [West Bengal](#)
- [Bihar](#)
- [Gujarat](#)
- [Kerala](#)
- [Karnataka](#)

State representation:



Using Folium

Summary of the data mining

Steps taken for data cleaning:

Table - `gender_age_train`:

- No null value found for the six focused markets
- Few data points for the ages 1, 6, 90, 94, 96 observed. These few data points were not giving us much information about the respective users. Hence we have removed such observations from our further analysis.

Table - `phone_brand_device_model` :

- No null value found for the six focused markets
- Most of the phone brand names and model names were in Chinese language. To overcome the challenge, we developed translator function to translate phone brand and model names in to English language to make it understandable for our further analysis.

Summary of the data mining

Steps taken for data cleaning:

Table – events_data:

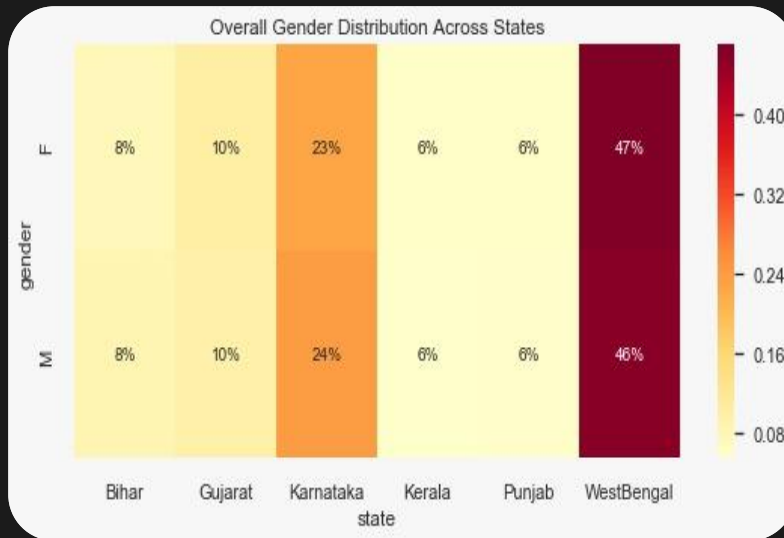
- Observed that state information was missing for 48 observations of the cities and details are as below:

City Name	Observations	Replaced State	Methodology
Arambagh	16	West Bengal	On the base of the information of rest of the data of this city.
Gangarampur	16	West Bengal	
Channapatna	16	Karnataka	

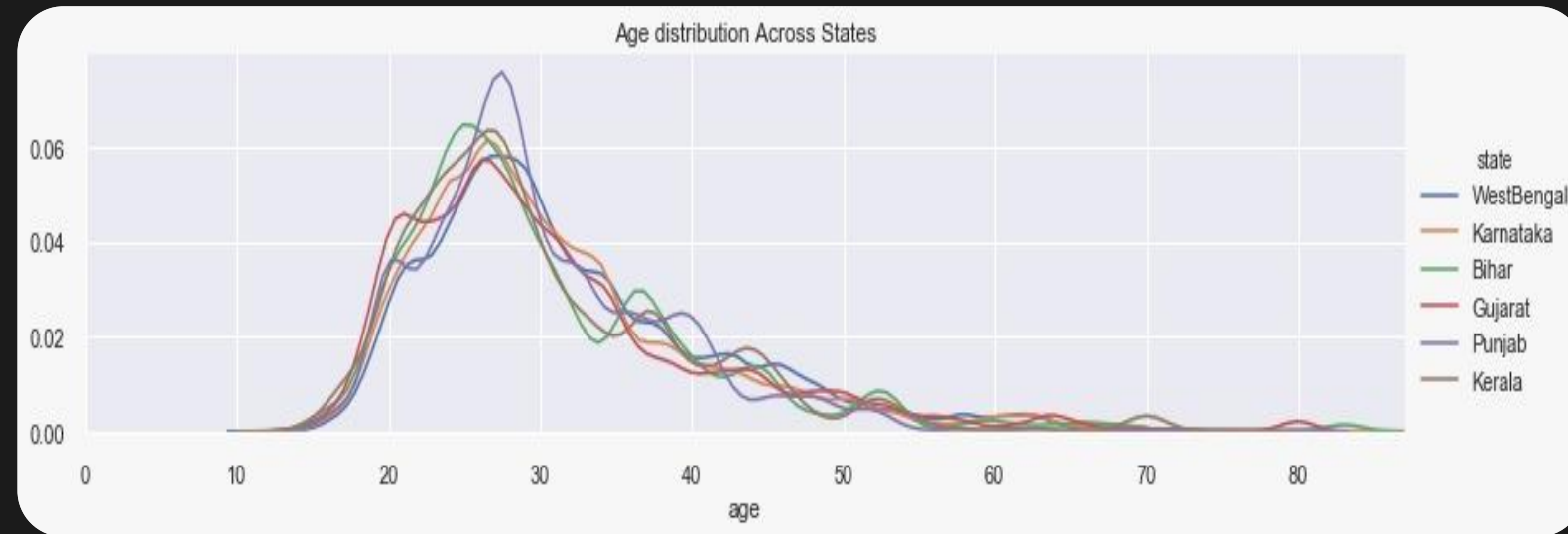
- In all 42 missing observations found for latitude and longitude.
 - Using **boxplot** – identified the outlier / wrong information
 - Developed “**web service**” to cross check the correct longitude and latitude to replace the missing information.
- Observed for few cases city names were not correct – be it wrong spelling or old city name
 - For example, NorthBarakpur” is not a place. It should be North Barackpore. Similarly, with SouthDumDum, UttarparaKotrung, HugliChunchura, IngrajBazar.
 - We corrected all these wrong city names basis information available in rest of the database and moved for further analysis.

Proposed Solution

Insaid Telecom has equal opportunity when it comes to their client distribution by gender. They can come up with generalized promotional plan.



Insaid Telecom needs to focus on specific age band i.e. Age 20-40. These are the potential clients for their stable business and can help them to expand their wing with more business.



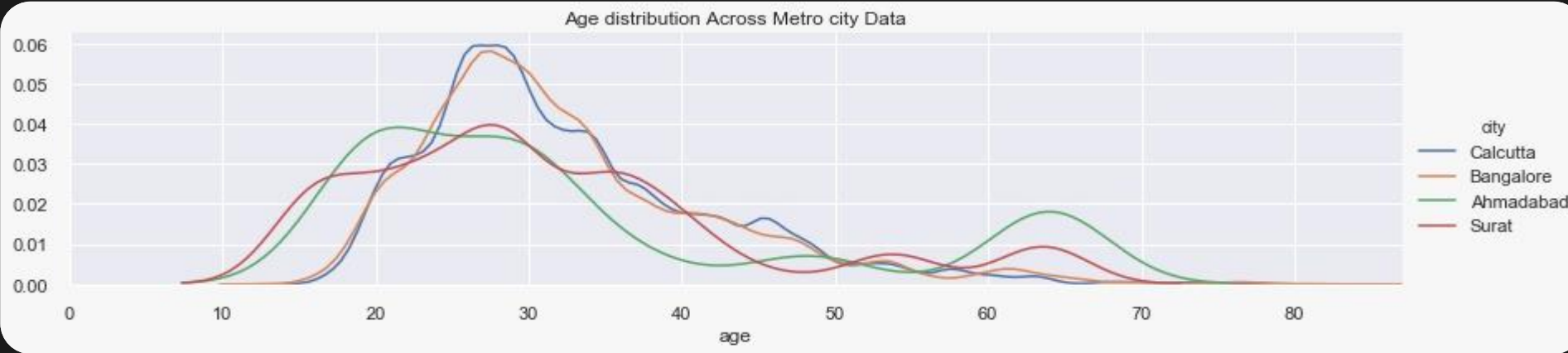
Proposed Solution

Problem Statement

Regional Profile

Which
State / City to Target?

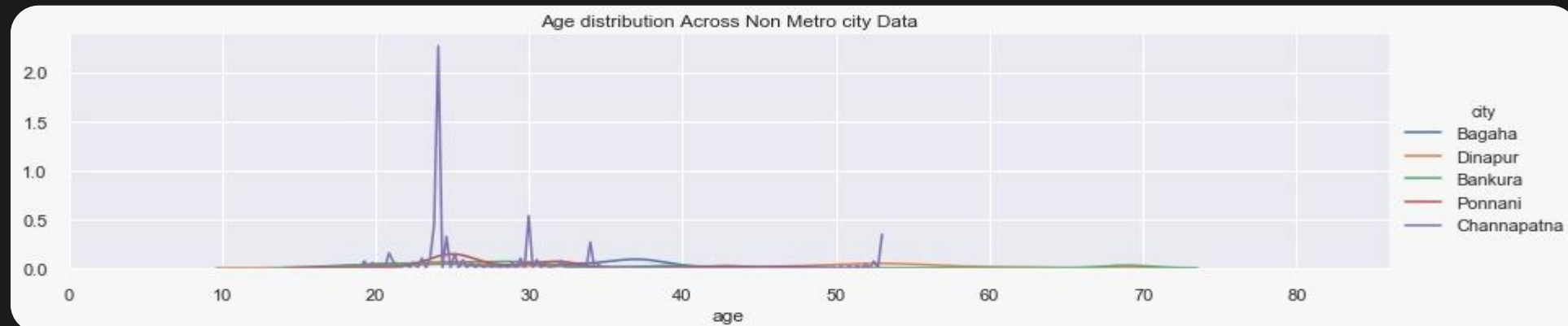
Metro Cities (4 cities : Calcutta, Bangalore, Ahmadabad and Surat)



Specific promotional activities required for Tier-1 i.e Metro cities for age band 20-40. **Insaidd Telecom** has high client usage in Tier – 1 cities so as to potential market for them.

Non-Metro Cities (Top 5 cities :Ponnani, Channapatna, Bagaha, Dinapur, Bankura)

Insaidd Telecom has some of the key markets in non-metro cities which are high potential. Lot of opportunity is there to grab new clients.

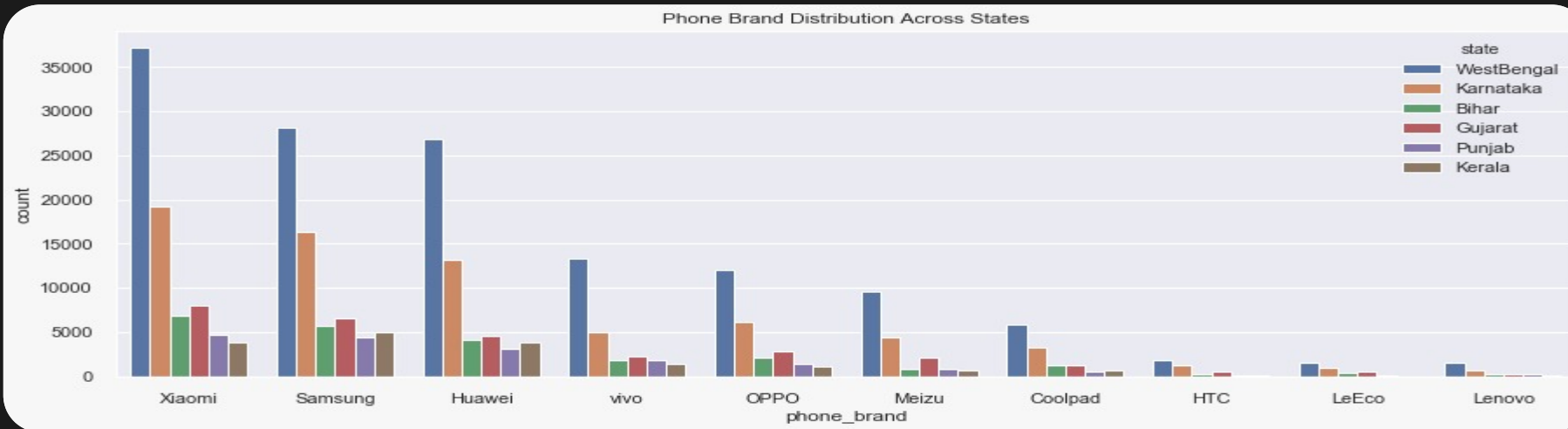


Proposed Solution

Problem Statement

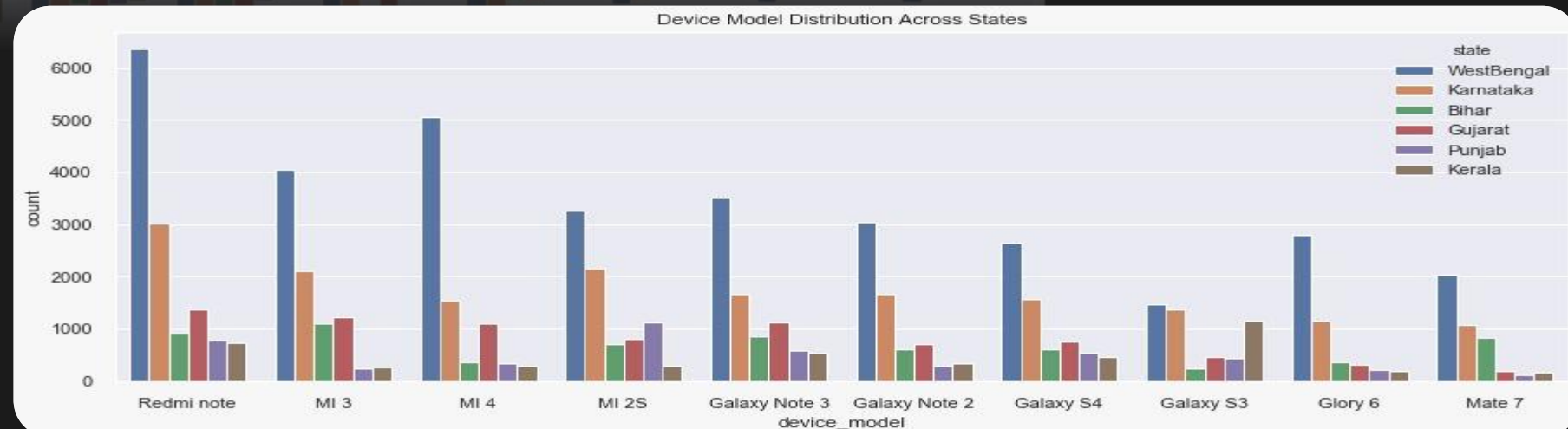
Marketing Activity

Communication and Media planning



Need to focus promotional activity wrt Phone Brand by Market. **Insaidd Telecom** has high potential to grab more clients with tie-up with brand and making strong promotions activity.

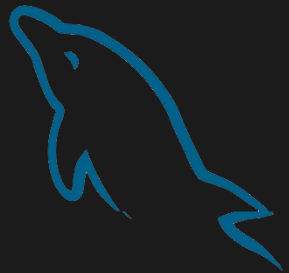
In addition to Phone brand, **Insaidd Telecom** can focus more at device level engagement. They need to have more focus on targeted device for successful promotional activity.



Tools

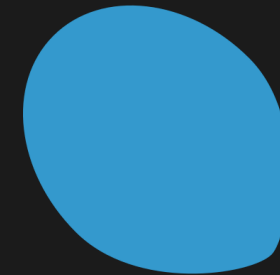


NumPy



Seaborn

MySQL®



Conclusion

Brief summary of we discovered based on results:

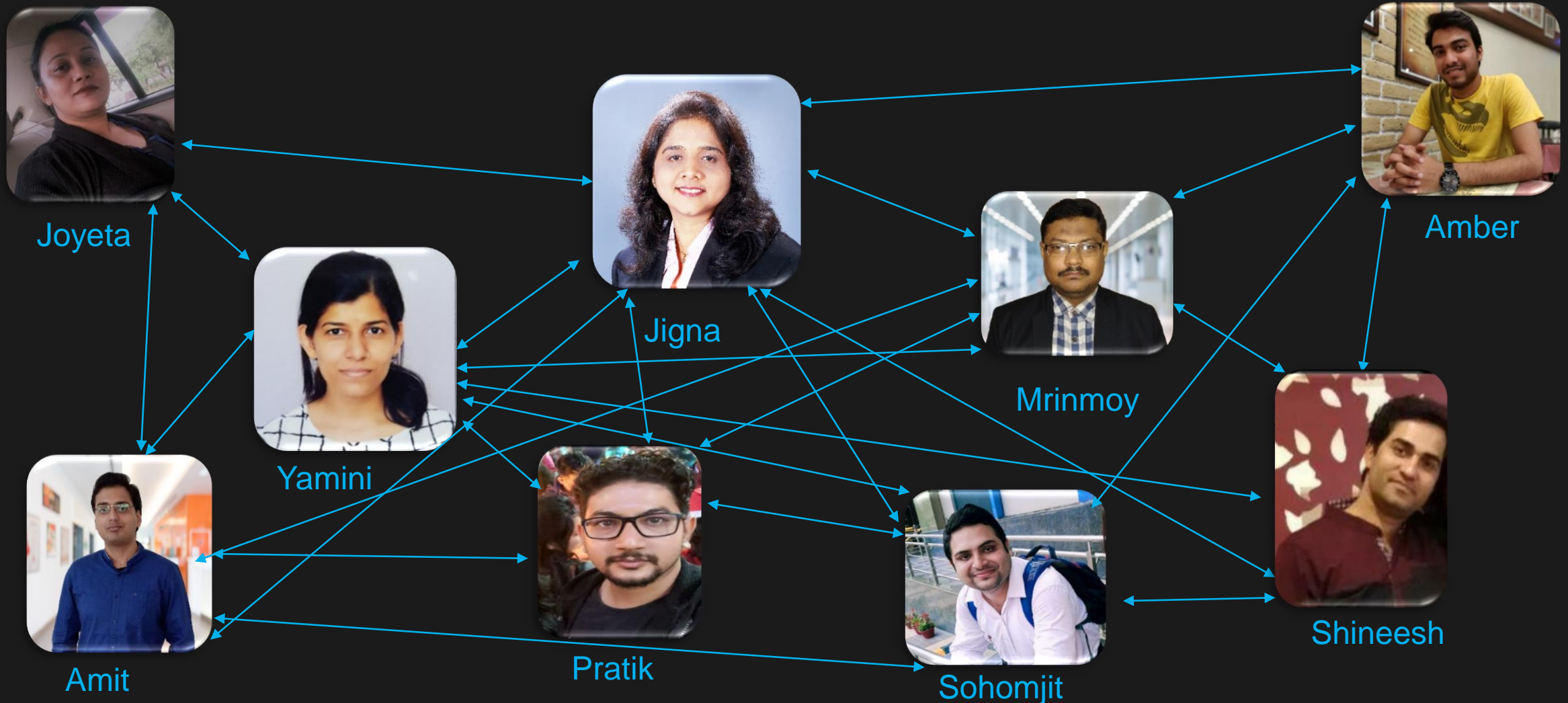
- **Insaid Telecom** needs to perform few promotional activities for being strong competitor in the market:
 - Special Plan for different age band
 - Special Plan along with tie-up with top running Mobile Brand in the specific market
 - Re-visit their existing plan for Tier-1 city and rest small city

Insaid Telecom has strong market place with 50 millions active devices on daily basis. Insaid telecom has High potential to engage more customers by giving promotions.

For more details – refer complete Analysis available in Jupyter Notebook

Core Team

If We Can Dream It We Can Do It!!



Thank You

