

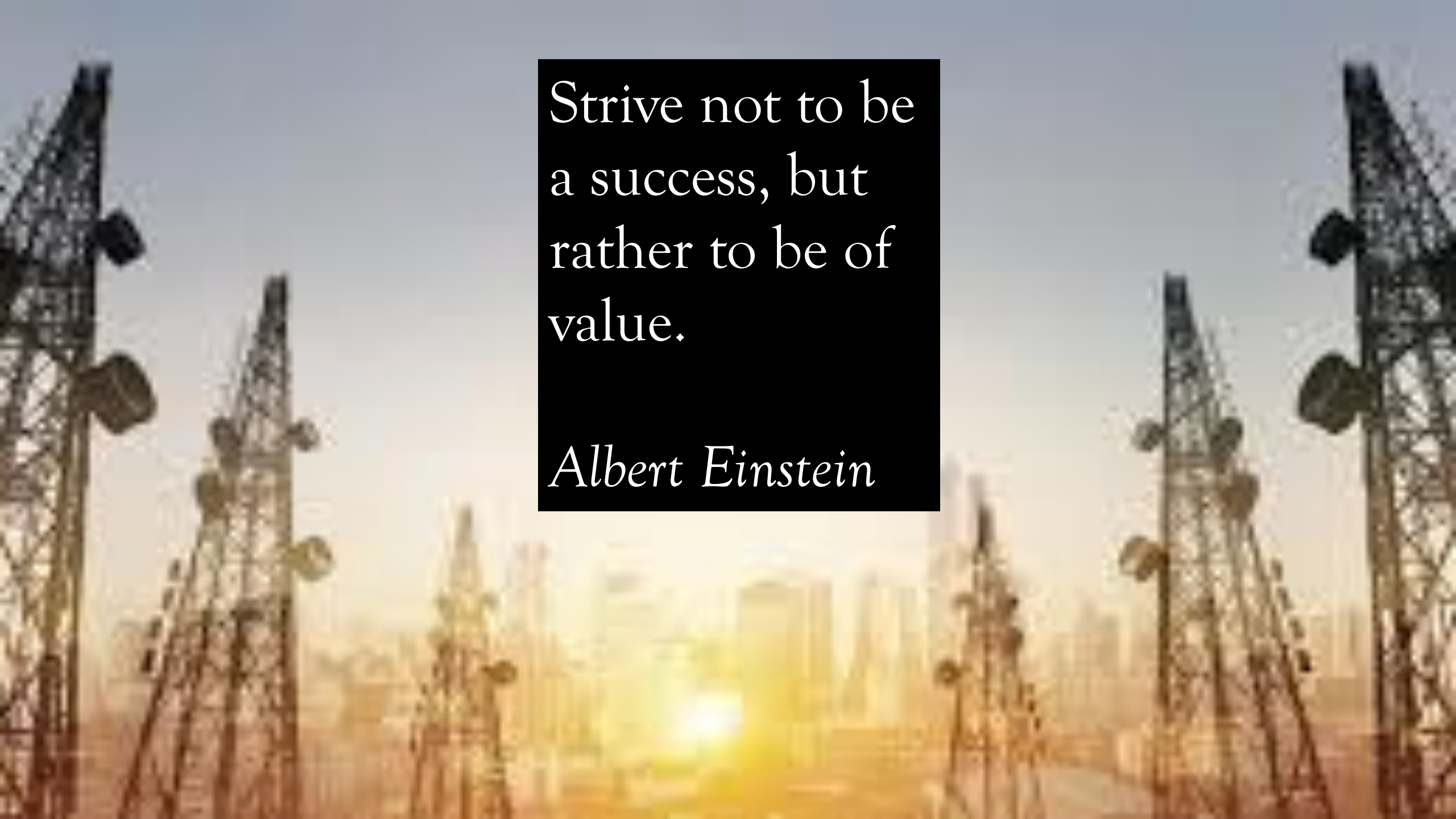


Telecom

Group 1004

Madhavi Gollapudi

Kinjal Botadra

The background of the image shows a city skyline at sunset. In the foreground, several tall, dark communication towers with multiple satellite dishes are visible. The sun is low on the horizon, creating a bright, hazy glow that fills the sky and reflects off the city buildings in the distance. The overall color palette is dominated by warm oranges, yellows, and greys.

Strive not to be
a success, but
rather to be of
value.

Albert Einstein

Agends

- ◇ InsaidianTelecom
- ◇ Problem Statement
- ◇ Data Description
- ◇ Data Processing
- ◇ EDA
- ◇ Story Board
- ◇ Summary
- ◇ Actionable Insights





Telecom

- ◆ InsaidTelecom, one of the leading telecom players, understands that customizing offering is very important for its business to stay competitive
- ◆ Currently, InsaidTelecom 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

Problem Statement

- ◆ In this **consulting assignment**, Insaidians are expected to build a dashboard to understand user's demographic characteristics based on their
 - ◆ mobile usage
 - ◆ geolocation
 - ◆ mobile device properties
- ◆ Doing so will help millions of developers and Telecom brand advertisers around the world pursue data-driven marketing efforts which are relevant to their users and catered to their preferences



SNO	Feature Name	Description
01	device_id	Unique device id
02	state	Which state the user belongs to
04	city	Which City the user belongs to
05	longitude	Logitude value of the location of the user
06	latitude	Latitude value of the location of the user
07	event_id	Unique id for every usage of the phone
08	timestamp	Date time information of when the phone is used

SNO	Feature Name	Description
01	device_id	Unique device id
02	age	Age of the user
03	group	Age group of the user
04	gender	Gender of the user

SNO	Feature Name	Description
01	device_id	Unique device id
02	phone_brand	Device's phone brand
03	device_model	Device's Model number

Data Description

Data Processing

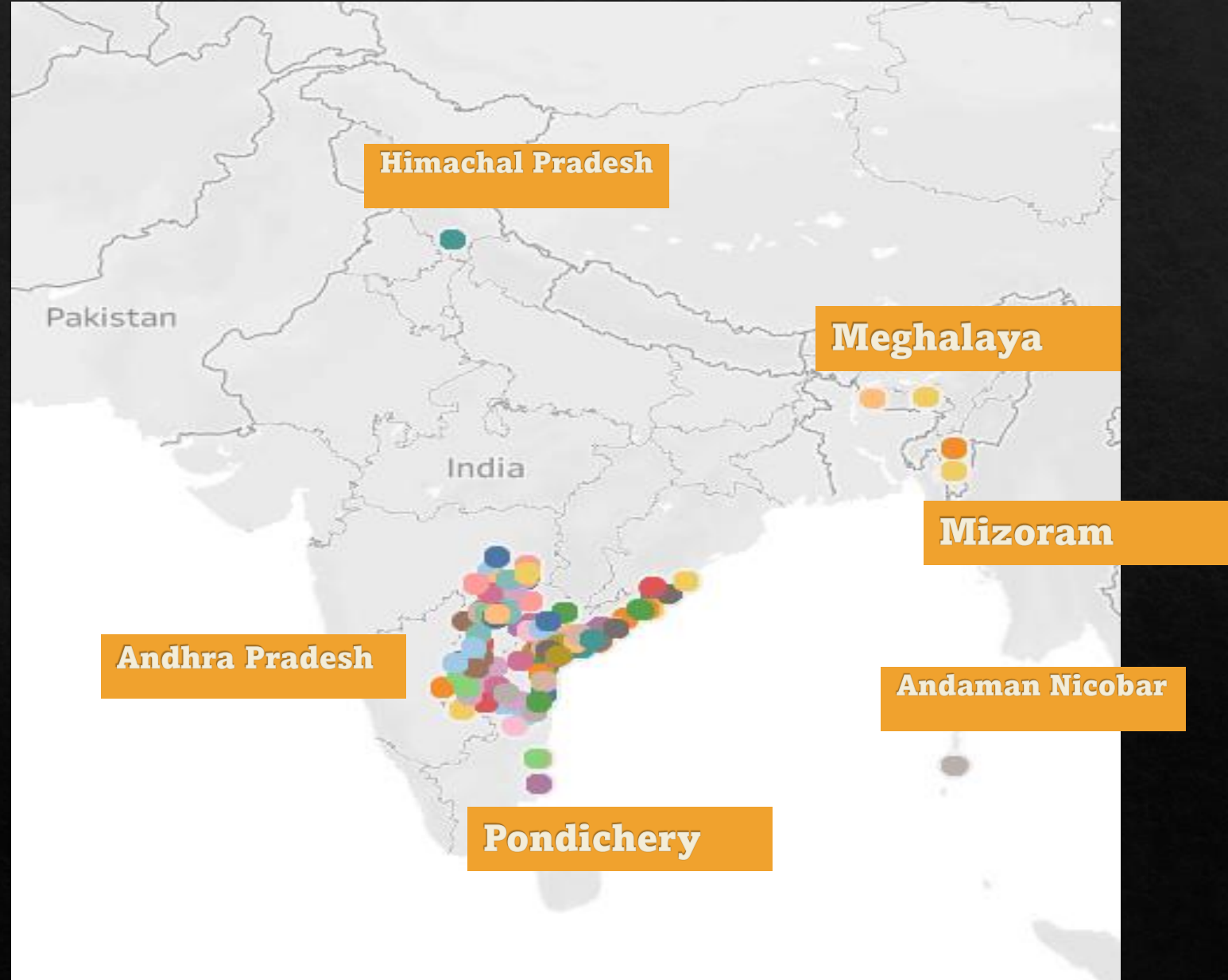
- ◆ Replacing null values of state
- ◆ Converting time stamp to date/hour/minute
- ◆ Group the city data with date and fill the nan values of device_id, latitude, longitude with forward or backward fill
- ◆ Converting device_id feature of phone_brand and gender_age to float
- ◆ Merging of all dataframes using inner join on device_id

Int64Index: 329172 entries, 3930 to 3252931

Data columns (total 18 columns):

#	Column	Non-Null Count	Dtype
0	event_id	329172 non-null	int64
1	device_id	329172 non-null	float64
2	timestamp	329172 non-null	object
3	longitude	329172 non-null	float64
4	latitude	329172 non-null	float64
5	city	329172 non-null	object
6	state	329172 non-null	object
7	Time_stamp	329172 non-null	datetime64[ns]
8	Date	329172 non-null	object
9	Hours	329172 non-null	int64
10	Min	329172 non-null	int64
11	lat_median	329172 non-null	object
12	long_median	329172 non-null	object
13	phone_brand	329172 non-null	object
14	device_model	329172 non-null	object
15	gender	329172 non-null	object
16	age	329172 non-null	int64
17	group	329172 non-null	object

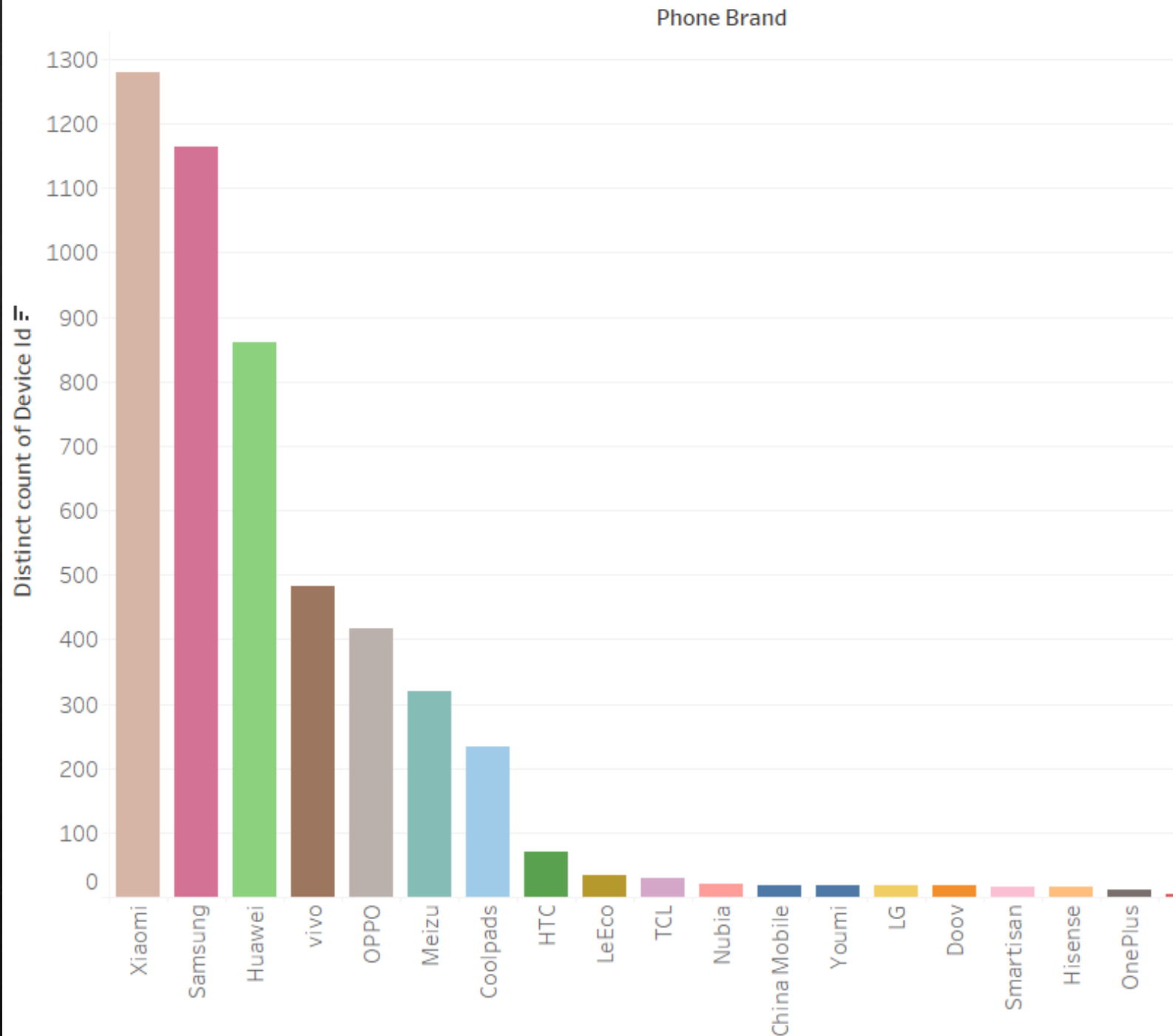
Focussing states
distribution



Phone brand distribution

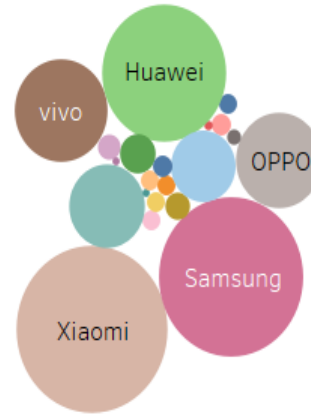
Top 5 brand

- ◇ Xiaomi
- ◇ Samsung
- ◇ Huawei
- ◇ Vivo
- ◇ OPPO

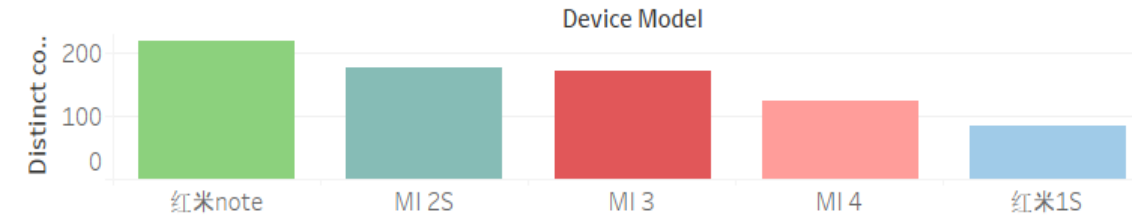


- ◇ Xiaomi is most used to Andra Pradesh, Meghalaya and Pondicherry
- ◇ Samsung is a major player in Andaman Nicobar, Himachal and Mizoram
- ◇ Huawei's ranking is 3rd in most of the states

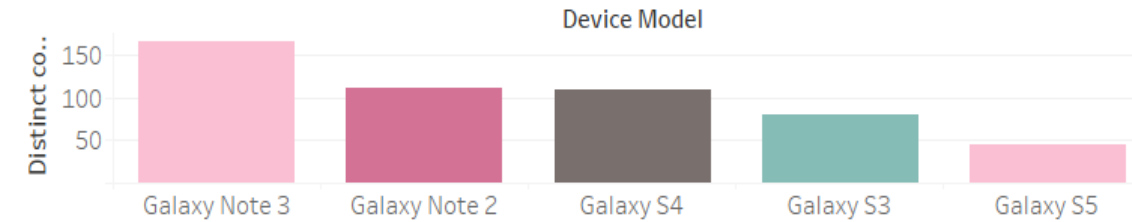
Phone Brand distribution across users



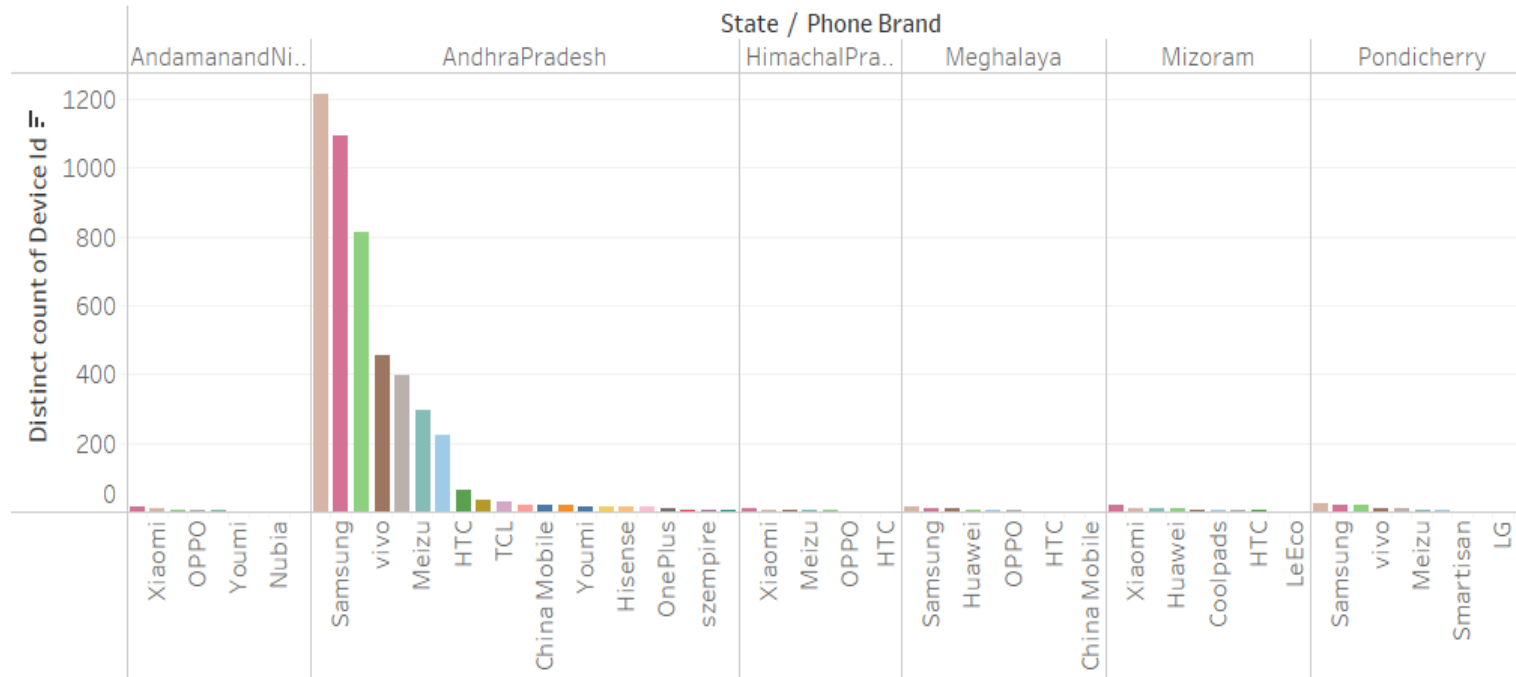
Xiaomi



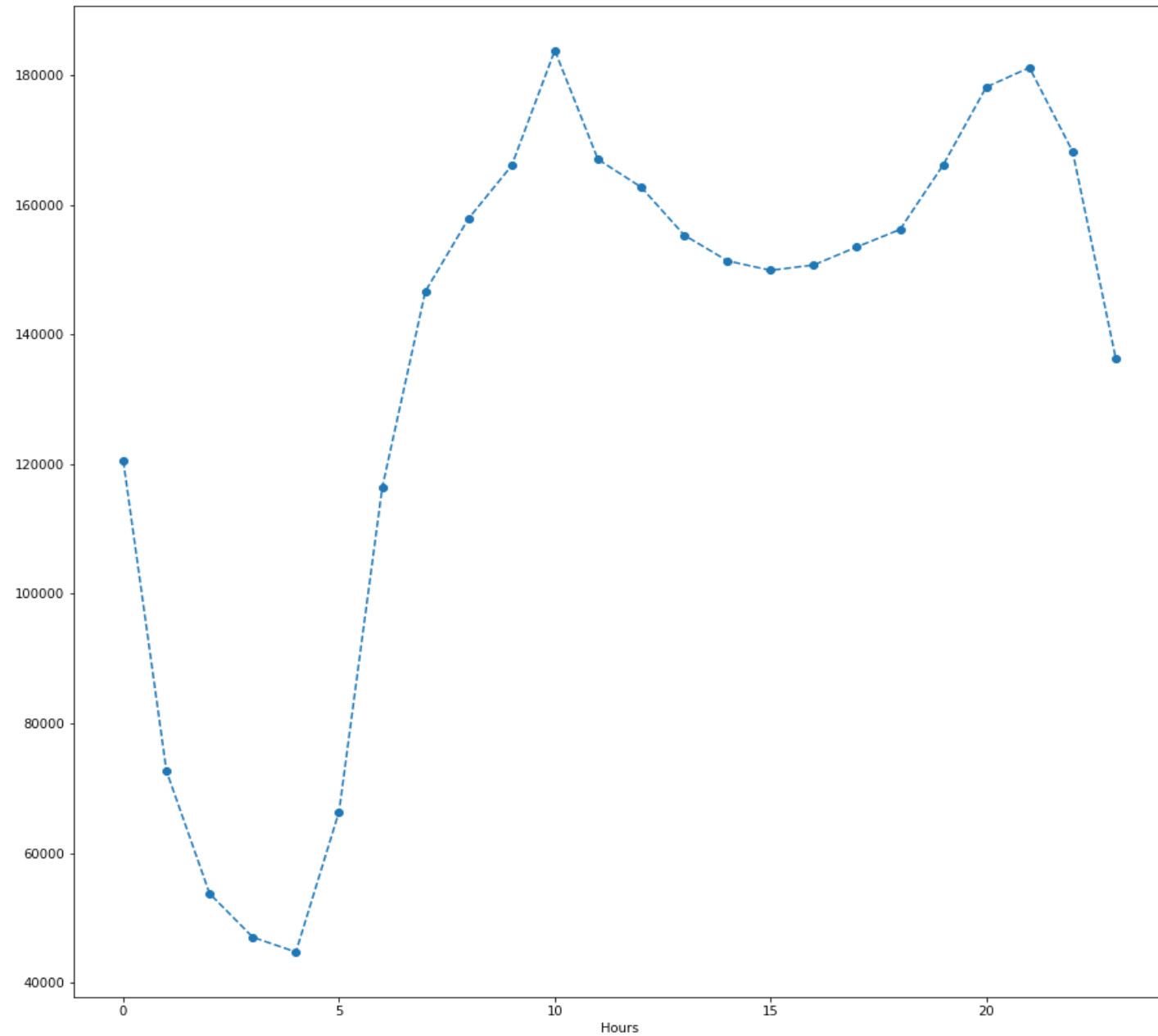
Samsung



State wise distribution of top 10 Phone Brands

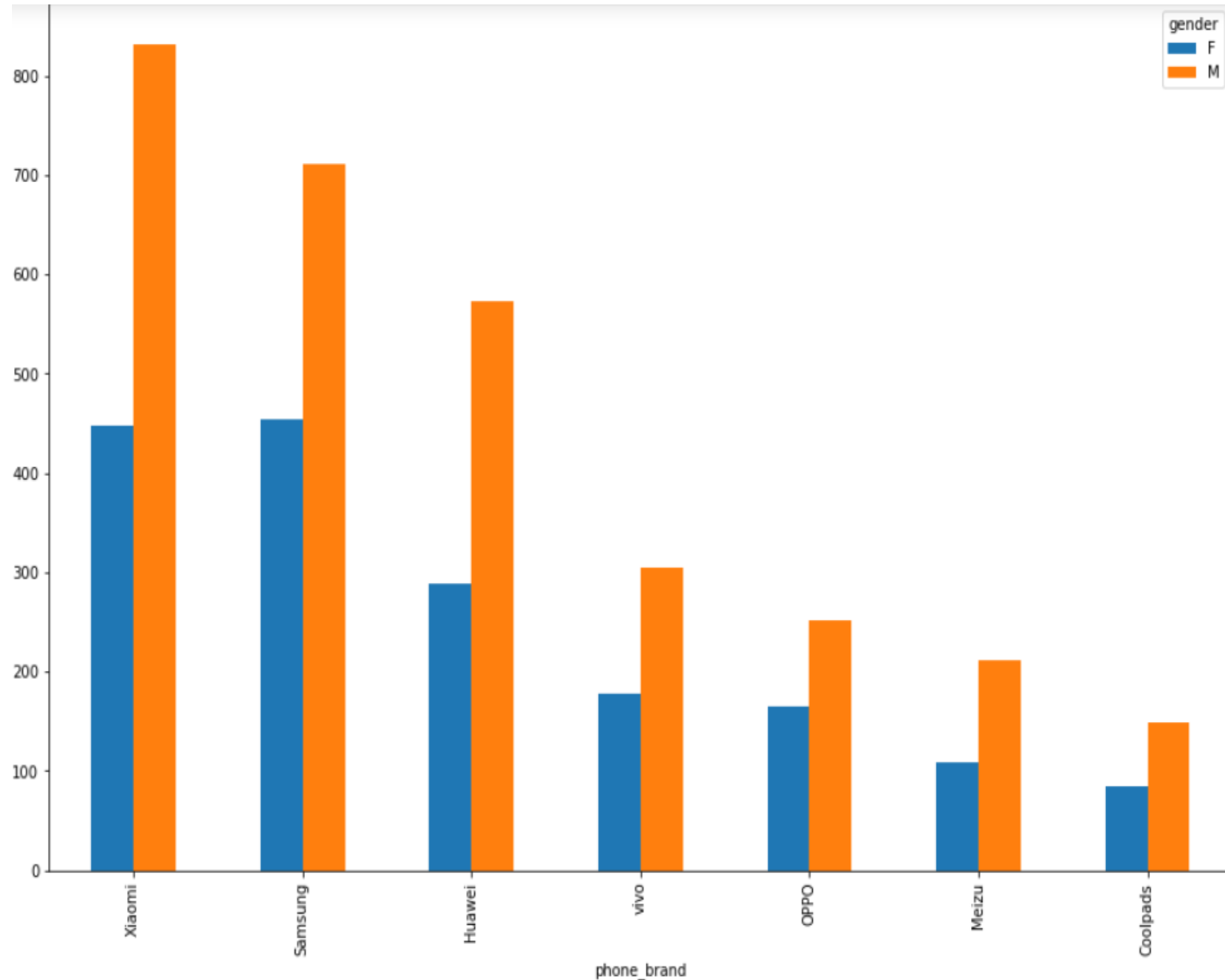


Hourly usage of
devices for the
whole data



Gender wise distribution
for brands:

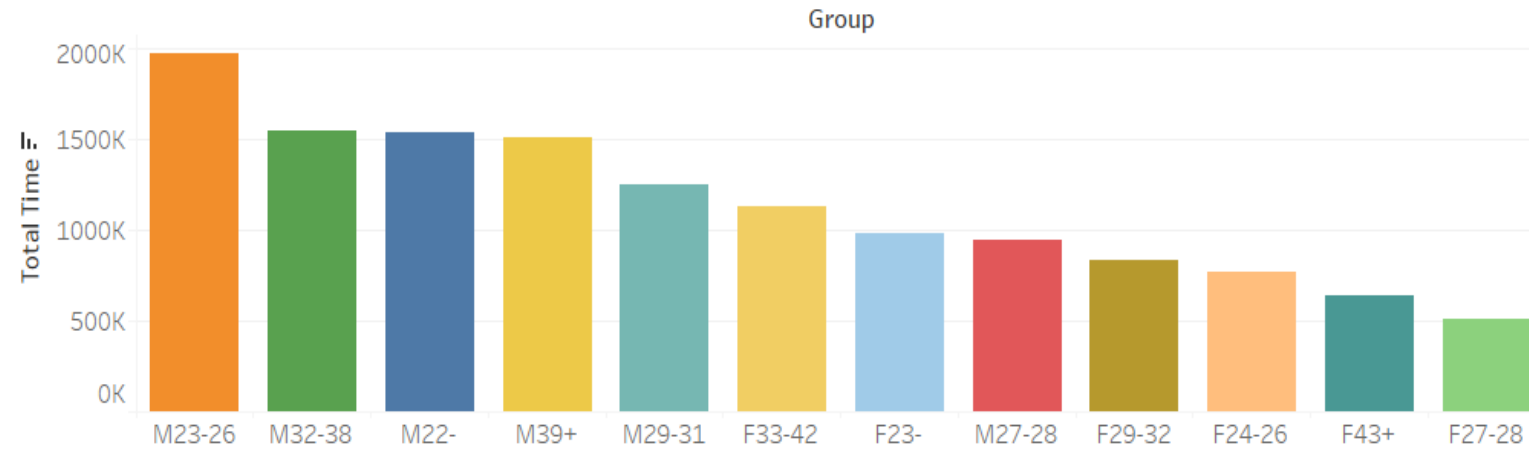
- ◈ In Males users, Xiaomi is most preferred than Samsung and Huawei
- ◈ In Females users, Samsung and Xiaomi are equally popular



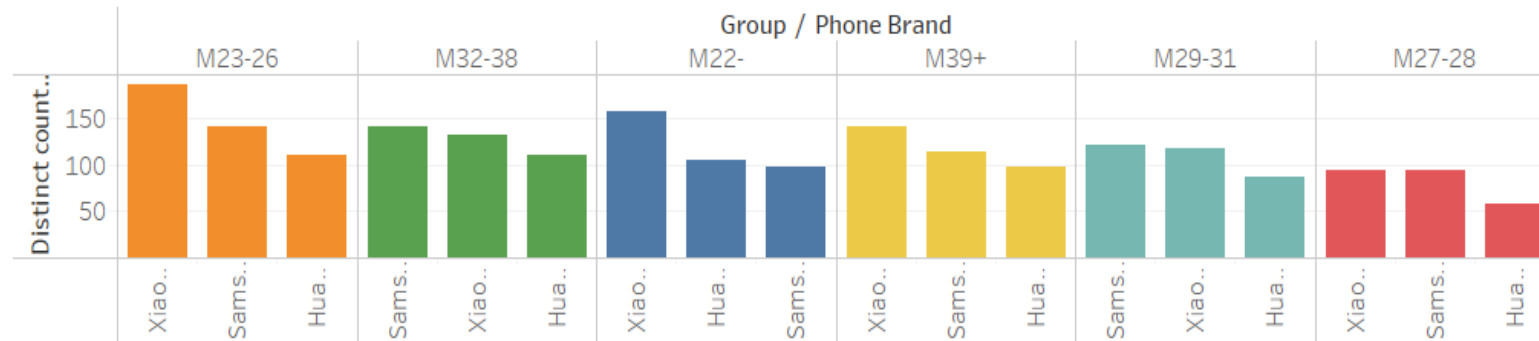
Age group distribution:

- Male users are more than Female
- Maximum Phone usage is done by Male 23-26
- In Females, maximum usage is done by 33-42
- Male group distribution:
 - Most of them use Xiaomi more, except 29-31(Samsung)
- Female group distribution:
 - 33-42 and 43+ prefer Samsung over Xiaomi

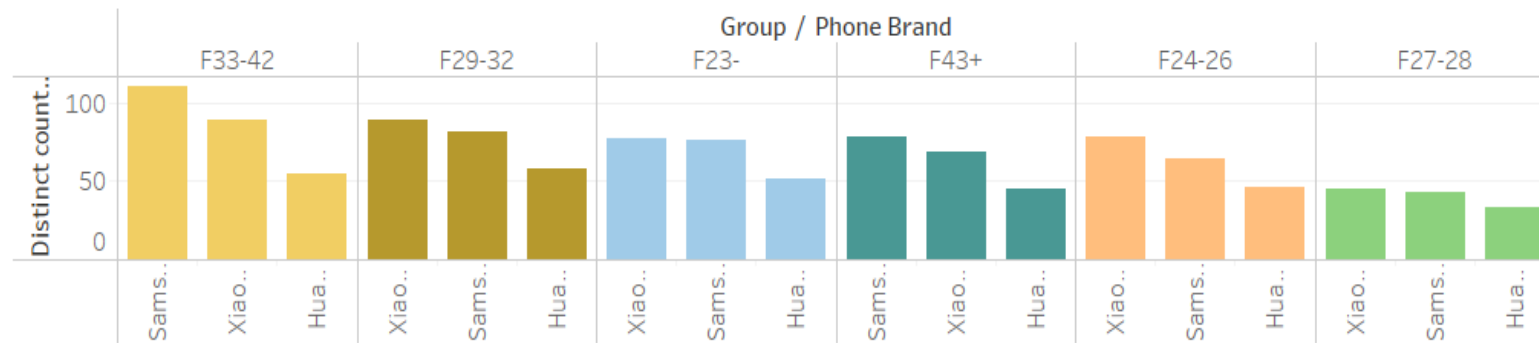
Group wise duration distribution



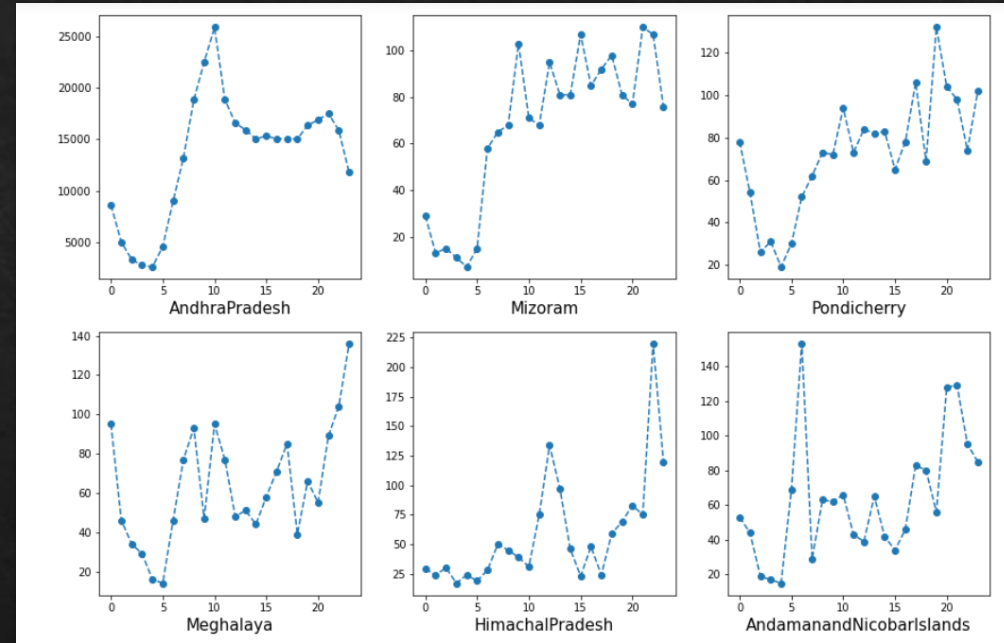
Group wise distribution of Brands for Male users



Group wise distribution of Brands for Female users

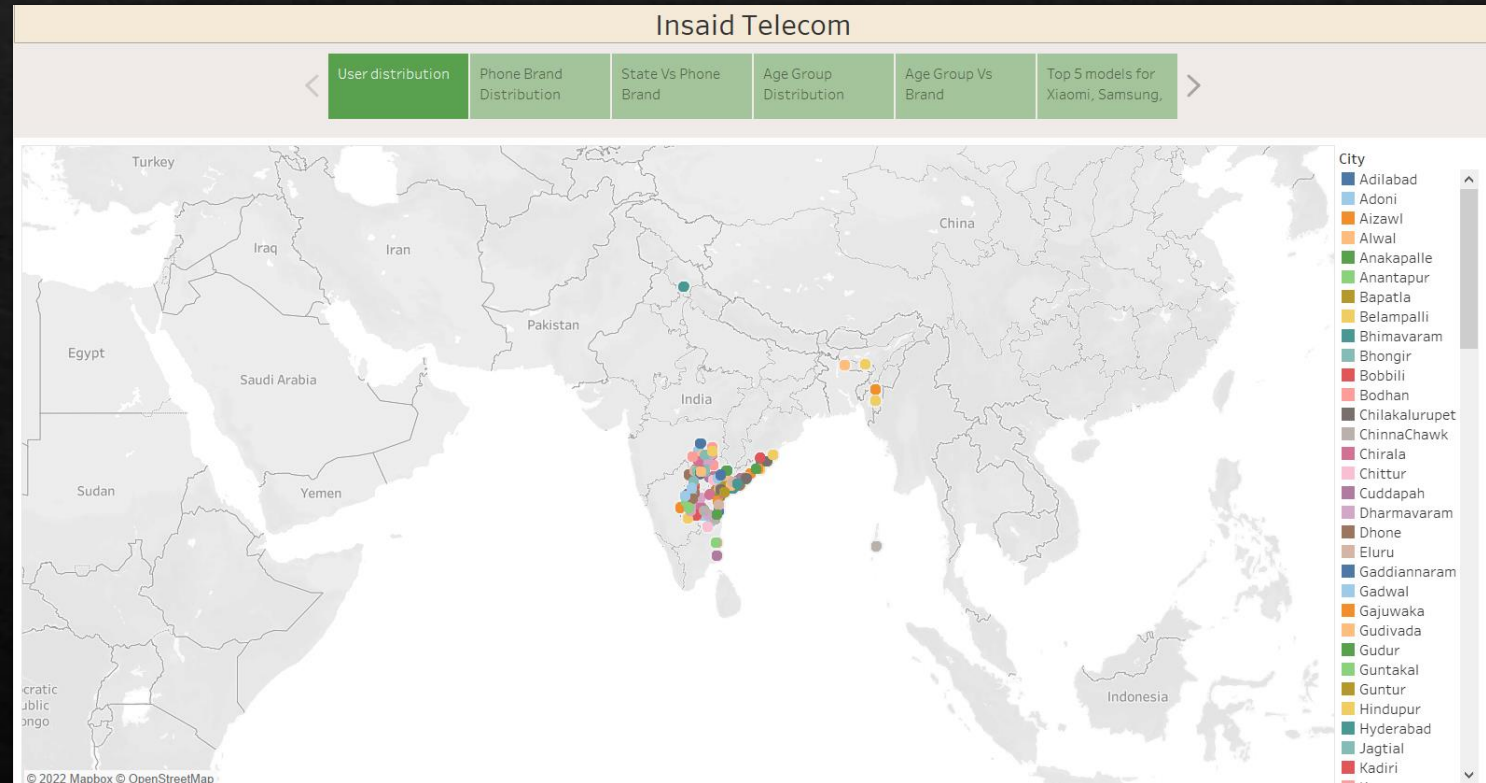


SNO	State	Peak Usage Hour	lowest Usage Hour
01	Andhrapradesh	10	5
02	Mizoram	20	3
03	Pondicherry	17	3
04	Meghalaya	23	5
05	Himachal Pradesh	22	3
06	Andaman And Nicobar	6	4



Usage Duration

Story Board



Summary

Xiaomi has captured Maximum market; main reason can be they are cheaper than Samsung

Samsung and Huawei are making their way to become top but if Samsung wants to beat Xiaomi, it needs to find a way to reduce cost

Brands like OPPO and Vivo need to produce a unique technology at the same time sell at a comparable price as Xiaomi to capture more customers

Andhra Pradesh has a greater number of device

Number of Male user are more compared to Female users in all the states

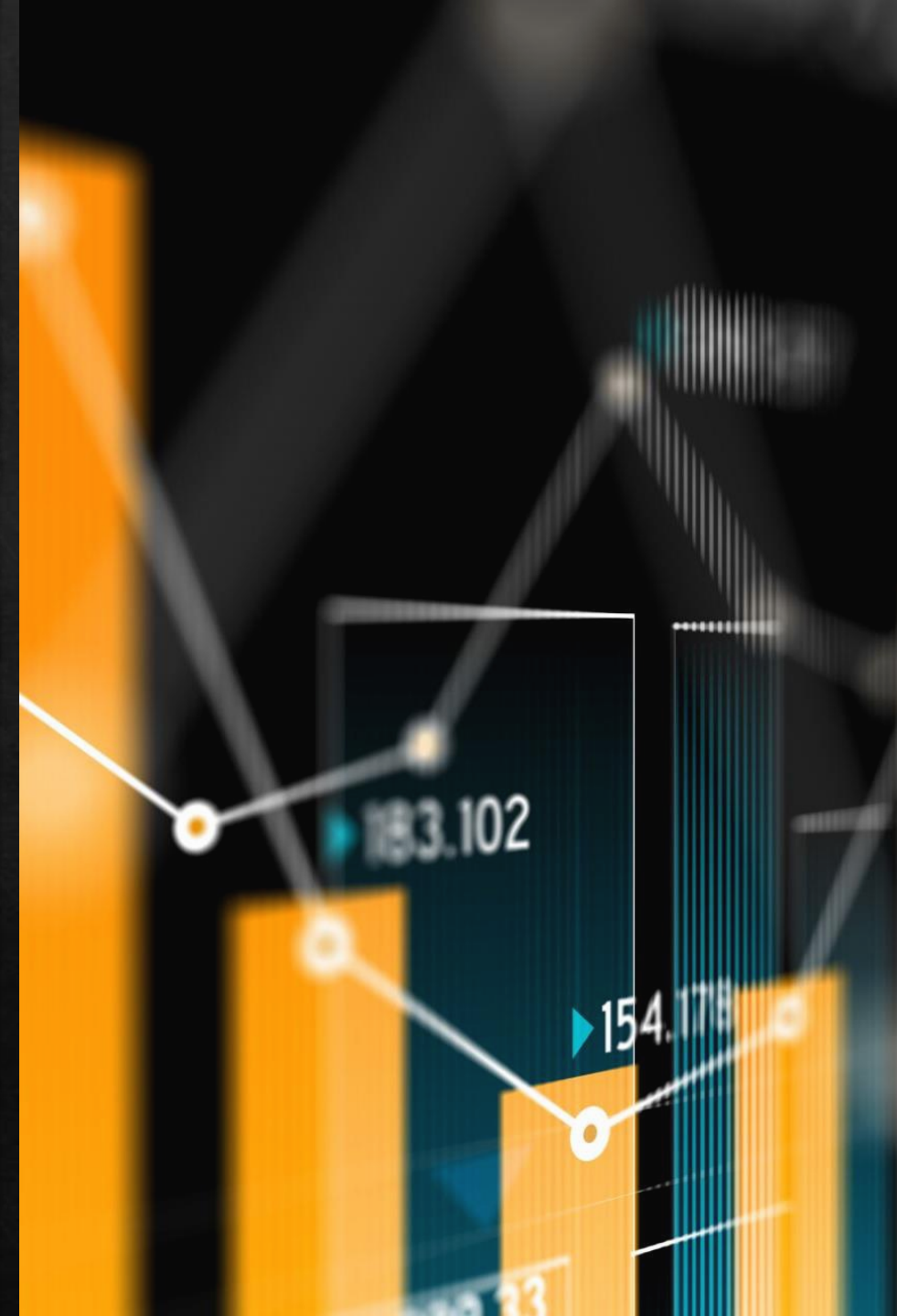
In the state Himachal Pradesh and Andaman and Nicobar users for the mobiles are in the same age group of 23 to 32 and 22 to 28 respectively

Whereas there is a huge variation of mobile usage between male and female in state Mizoram, Andhra Pradesh, Meghalaya, Pondicherry

Redmi, Galaxy models from Xiaomi and Samsung are the most used models

Peak usage of devices is observed at 10 and 20 hours

Low usage of devices is observed at 3



Actionable Insights

Samsung must try to reduce the cost

Brands must try to understand demand of Indian people

Most important features:

- Qualcomm Snapdragon Octa core processor
- Long lasting battery life
- Awesome camera in a low mid range price segment

One specific feature which separates Redmi from the other brands is their IR blaster sensor

All brands must target age group 31 to 40 which has maximum users

Female users can be targeted by giving special discounts and offers





Thank you

◆ Care

◆ Connect

◆ Communicate

◆ Group: 1004