Traffic And Capacity Analytics For Major ports

1.Data Collection:

DATASET

Port	Traffic in El	Traffic in El	Traffic in El	Total Capac	Total Capac	Total Capacity in Eleventh Plan (MT) (2011-12) %
Kolkata	1343	1223	9100	3145	1635	5100
Haldia	4450	3101	7000	6340	5070	7900
Paradeep	7640	5425	7100	10640	7650	7100
Visakhapat	8220	6742	8200	10810	7293	6700
Ennore	4700	1496	3200	6420	3100	4800
Chennai	5750	5571	9700	7230	7972	11000
Tuticorin	3172	2810	8900	6398	3334	5200
Cochin	3817	2010	5300	5475	4098	7400
NMPT	4881	3294	6800	6050	5097	8400
Mormugao	4455	3900	8800	6690	4190	6200
Mumbai	7105	5618	7900	9191	4453	4800
JNPT	6604	6575	10000	9560	6400	6600
Kandla	8672	8250	9500	12220	8691	7100

2.Data Preparations:

Some prevalent challenges faced while collecting data are inconsistent data, ambiguous data, duplicate data, inaccurate data, too much data, etc.

To overcome this problem data preparation is done.

It is the process of profiling, cleansing, transforming and validating data.

- Data profiling and cleansing
- Data structuring
- Data transformation

- Data validation

3.Implementation Details:

Data analytics for analysing and estimating traffic and capacity on major ports is done by creating various graphs and charts
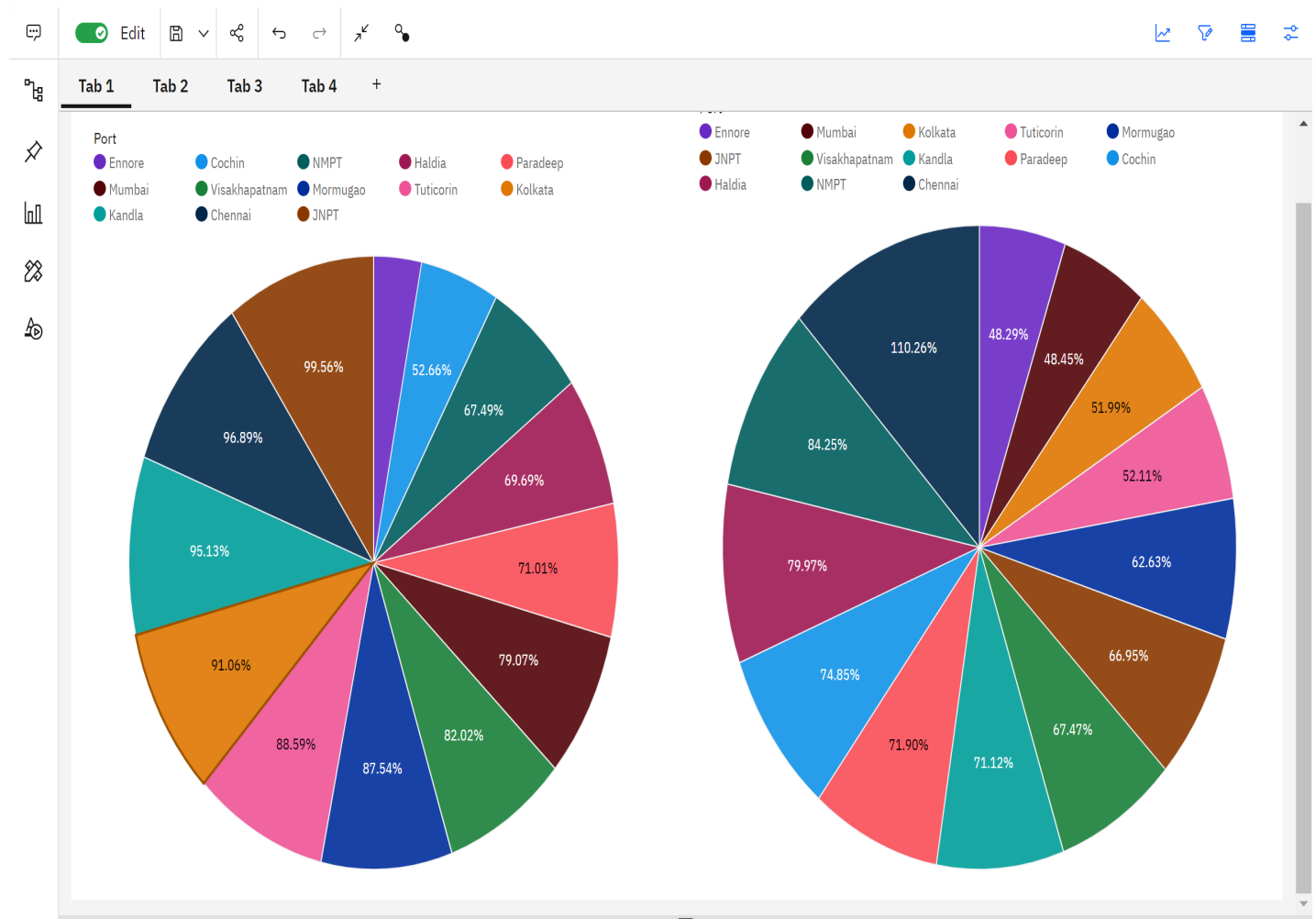
to highlight the insights and visualizations.

Plotting different graphs give broad understanding about the data and relationship among the features of data.

This supports in creating meaningful dashboards for exploring the data and making future predictions from them.
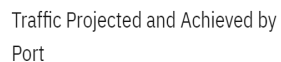
4.Data Visualization :

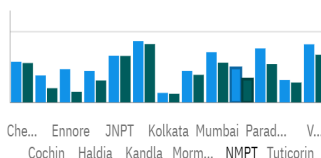Each piece (port) is a level of the categoric variable, and the percentage of traffic is the numeric variable.

Port Wise Traffic and Total Percent
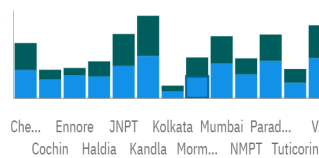
Measures
● Traffic Percent ● Total Percent

110.26%
74.85%
52.66%
79.97%
31.82%
71.12%
66.95%
62.03%
84.25%
67.49%
88.59%
52.11%

Chennai Cochin Ennore Haldia JNPT Kandla Kolkata Mormugao Mumbai NMPT Paradeep Tuticorin Visakh...

Traffic Projected and Achieved by Port

Measures
● Traffic Projected ● Traffic Achieved

Che... Ennore JNPT Kolkata Mumbai Parad... V...
Cochin Haldia Kandla Morm... NMPT Tuticorin

Traffic Projected vs Achieved by Port

Measures
● Traffic Projected ● Traffic Achieved

Che... Ennore JNPT Kolkata Mumbai Parad... V...
Cochin Haldia Kandla Morm... NMPT Tuticorin

Port

Search
☑ Chennai
☑ Cochin
☑ Ennore
☑ Haldia
☑ JNPT
☑ Kandla
☑ Kolkata
☑ Mormugao
☑ Mumbai
☑ NMPT
☑ Paradeep
☑ Tuticorin
☑ Visak...atnam

Total Capacity Achieved vs Projected by Port

Column
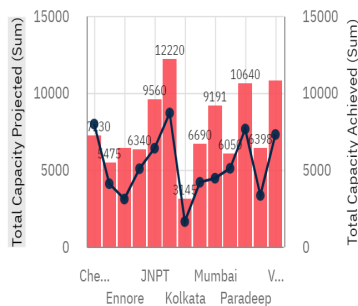● Total Capacity Projected (Sum)
Line
● Total Capacity Achieved (Sum)

15000
12220
9560
9191
10640
6340
6690
6398
4750
15000
10000
5000
0

Che... Ennore JNPT Kolkata Mumbai Paradeep V...

Projected Traffic vs Total Capacity by Port

Measures
● Traffic Projected
● Total Capacity Projected

20,000
10,000
0

Che... Ennore JNPT Kolkata Mumbai Paradeep V...
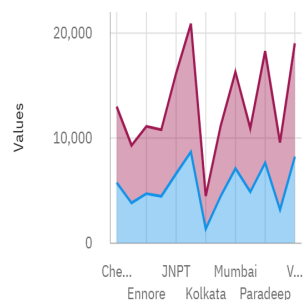
Total Capacity Achieved vs Traffic Achieved by Port

Measures
● Total Capacity Achieved
● Traffic Achieved

Port		
Chennai	7972	5571
Cochin	4098	
Ennore	3100	
Haldia	5070	3101
JNPT	6400	6575
Kandla	8691	8250
Kolkata		
Mormugao	4190	3900
Mumbai	4453	5618
NMPT	5097	3294
Paradeep	7650	5425
Tuticorin	3334	
Visakhapatnam	7293	6742

0 5000 10000 15000

Total Capacity Ach...

Port
● Visakhapatnam ● Kolkata ● Haldia ● Paradeep ● Mormugao ● Kandla ● Chennai ● Tuticorin ● Cochin ● Mumbai

1,635   8,691

Tab 1   Tab 2   Tab 3   **Tab 4**   +

70.8K
Traffic Projected

56K
Traffic Achieved

100K
Total Capacity Projected

69K
Total Capacity Achieved

Total Capacity Achieved and Traffic Achieved by Port

Measures
- Total Capacity Achieved
- Traffic Achieved

Port	Total Capacity Achieved	Traffic Achieved
Chennai	7972	5571
Cochin	4098	2010
Ennore	3100	1496
Haldia	5070	3101
JNPT	6400	6575
Kandla	8691	8250
Kolkata	1635	1223
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Values

Port