

Process Chart

Step 1- Download the weather & sales data from Web Site.

| rank | year | continent | economy | port | port_label | lon | lat | volume | |
|------|------|-----------|---------|----------------------|-------------------|---------------|-------------|-----------|-------|
| 1 | 1 | 2014 | Asia | China | Shanghai | Shanghai | 121.4737010 | 31.230416 | 35268 |
| 2 | 2 | 2014 | Asia | Singapore | Singapore | Singapore | 103.8198360 | 1.352083 | 33869 |
| 3 | 3 | 2014 | Asia | China | Shenzhen | Shenzhen | 114.0578650 | 22.543096 | 23798 |
| 4 | 4 | 2014 | Asia | Hong Kong | Hong Kong | Hong Kong | 114.1094970 | 22.396428 | 22374 |
| 5 | 5 | 2014 | Asia | China | Ningbo-Zhoushan | Ningbo/Z-shan | 121.9880433 | 29.901620 | 19450 |
| 6 | 6 | 2014 | Asia | South Korea | Busan | Busan | 129.0756416 | 35.179554 | 18423 |
| 7 | 7 | 2014 | Asia | China | Qingdao | Qingdao | 120.3826090 | 36.067108 | 16624 |
| 8 | 8 | 2014 | Asia | China | Guangzhou | Guangzhou | 113.2643850 | 23.129110 | 16160 |
| 9 | 9 | 2014 | Asia | United Arab Emirates | Jebel Ali (Dubai) | Dubai | 55.0272904 | 24.985715 | 14750 |
| 10 | 10 | 2014 | Asia | China | Tianjin | Tianjin | 117.2009830 | 39.084158 | 14050 |
| 11 | 11 | 2014 | Europe | Netherlands | Rotterdam | Rotterdam | 4.4777325 | 51.924420 | 12453 |
| 12 | 12 | 2014 | Asia | Malaysia | Port Klang | Port Klang | 101.3928300 | 2.999852 | 10736 |
| 13 | 13 | 2014 | Asia | Taiwan | Kaohsiung | Kaohsiung | 120.3014353 | 22.627278 | 10593 |
| 14 | 14 | 2014 | Asia | China | Dalian | Dalian | 121.6146820 | 38.914003 | 10128 |
| 15 | 15 | 2014 | Europe | Germany | Hamburg | Hamburg | 9.9936818 | 53.551085 | 9729 |

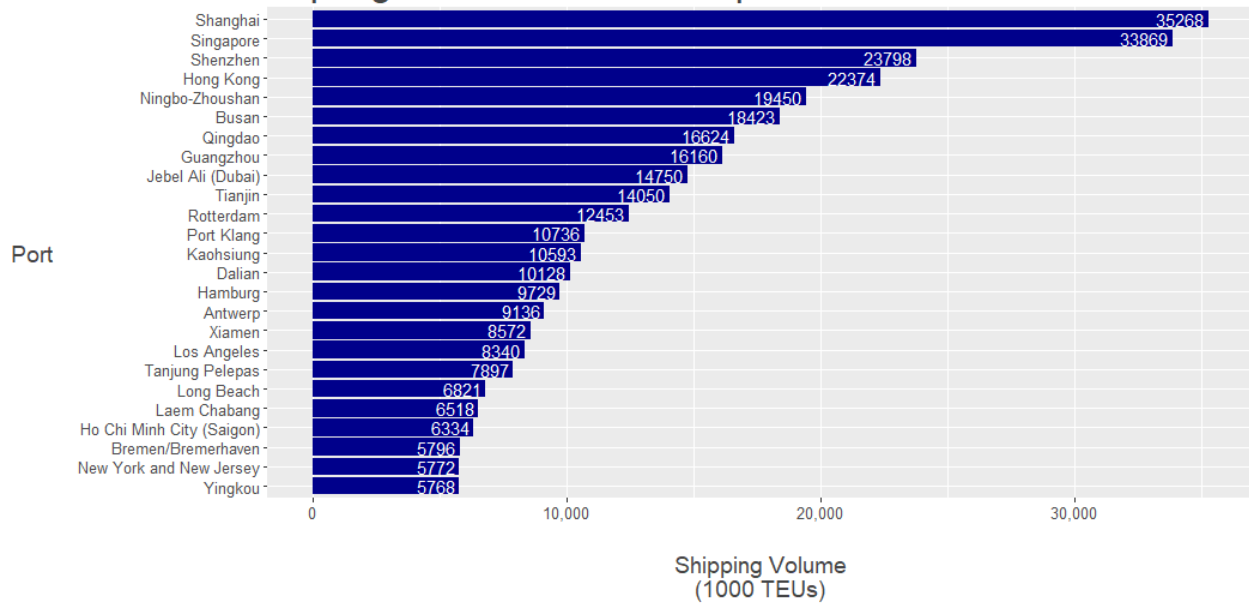
Step-2 Analyze the data.



Step-3 Plot the to easily identify the top ports worldwide.



Top high-volume worldwide ports in 2014



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Shipping Data Analytics Illustration

Step 1: Download the dataset for average turnaround time for the major ports of India



| Year | Kolkata.D.S | Haldia.D.C | Paradip | Vishakhapatnam | Ennore | Chennai | Tuticorin | Cochin | New.Mangalore | Mormugao | J.L.Nehru |
|---------|-------------|------------|---------|----------------|--------|---------|-----------|--------|---------------|----------|-----------|
| 2004-05 | 4.17 | 4.05 | 3.41 | 3.20 | 1.72 | 3.94 | 2.66 | 2.62 | 2.96 | 5.66 | 1.94 |
| 2005-06 | 4.12 | 4.89 | 3.56 | 3.79 | 2.23 | 3.32 | 2.83 | 2.70 | 3.00 | 6.06 | 1.97 |
| 2006-07 | 4.38 | 3.85 | 3.54 | 3.65 | 1.89 | 3.36 | 3.67 | 2.17 | 3.14 | 6.15 | 1.43 |
| 2007-08 | 5.46 | 4.26 | 5.54 | 3.91 | 2.08 | 4.55 | 3.85 | 1.94 | 3.21 | 6.24 | 1.80 |
| 2008-09 | 5.10 | 4.21 | 4.78 | 3.93 | 2.35 | 4.15 | 3.64 | 2.14 | 3.00 | 5.95 | 1.90 |
| 2009-10 | 6.80 | 5.01 | 9.04 | 4.78 | 2.11 | 4.04 | 3.90 | 2.08 | 3.06 | 8.91 | 2.01 |
| 2010-11 | 6.21 | 4.45 | 7.73 | 5.84 | 2.78 | 4.36 | 4.00 | 2.20 | 2.70 | 10.43 | 2.64 |

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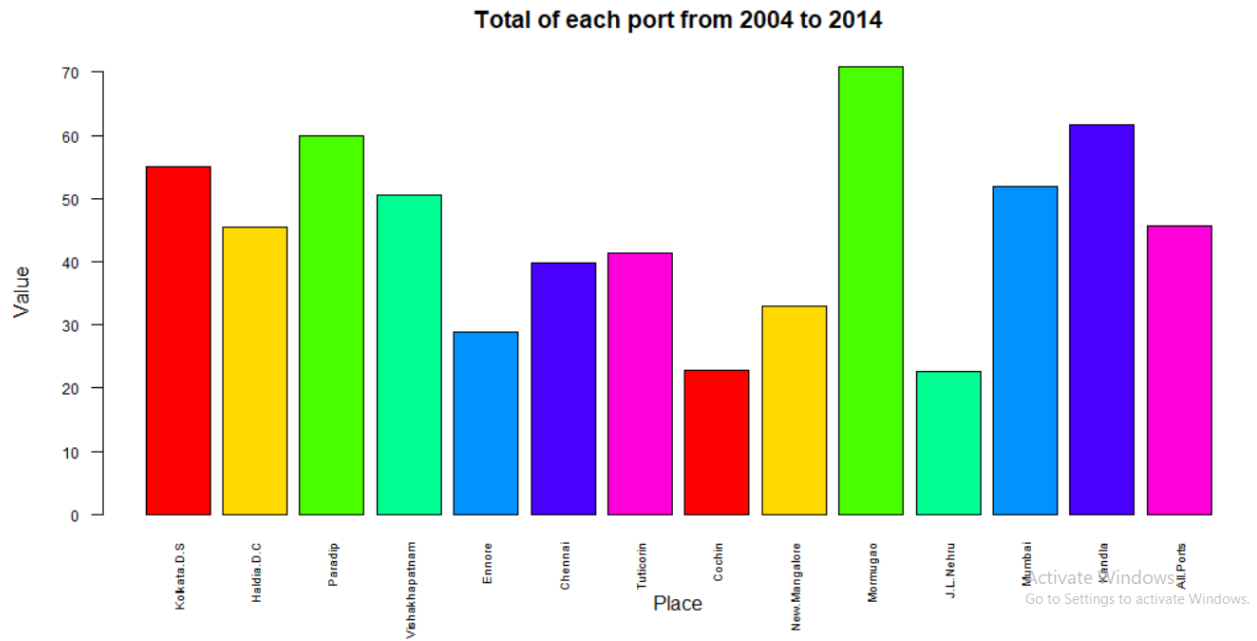
Shipping Data Analytics Illustration

Step 2: Calculate the total average turnover of each port.



| | |
|-----------------------|-------|
| Kolkata.D.S | 55.10 |
| Haldia.D.C | 45.43 |
| Paradip | 59.95 |
| Vishakhapatnam | 50.57 |
| Ennore | 28.84 |
| Chennai | 39.87 |
| Tuticorin | 41.27 |
| Cochin | 22.78 |
| Mumbai | 33.05 |

Step 3: Plot a simple bar graph.



We have conducted our analysis and plotting on RStudio.