DATA ANALYSIS PROJECT

TEAM MEMBERS

Popuri Dhanush-190030031
Yaswanth Reddy-190010045
M Srihari   -190030027
B Hemanth   -190020012
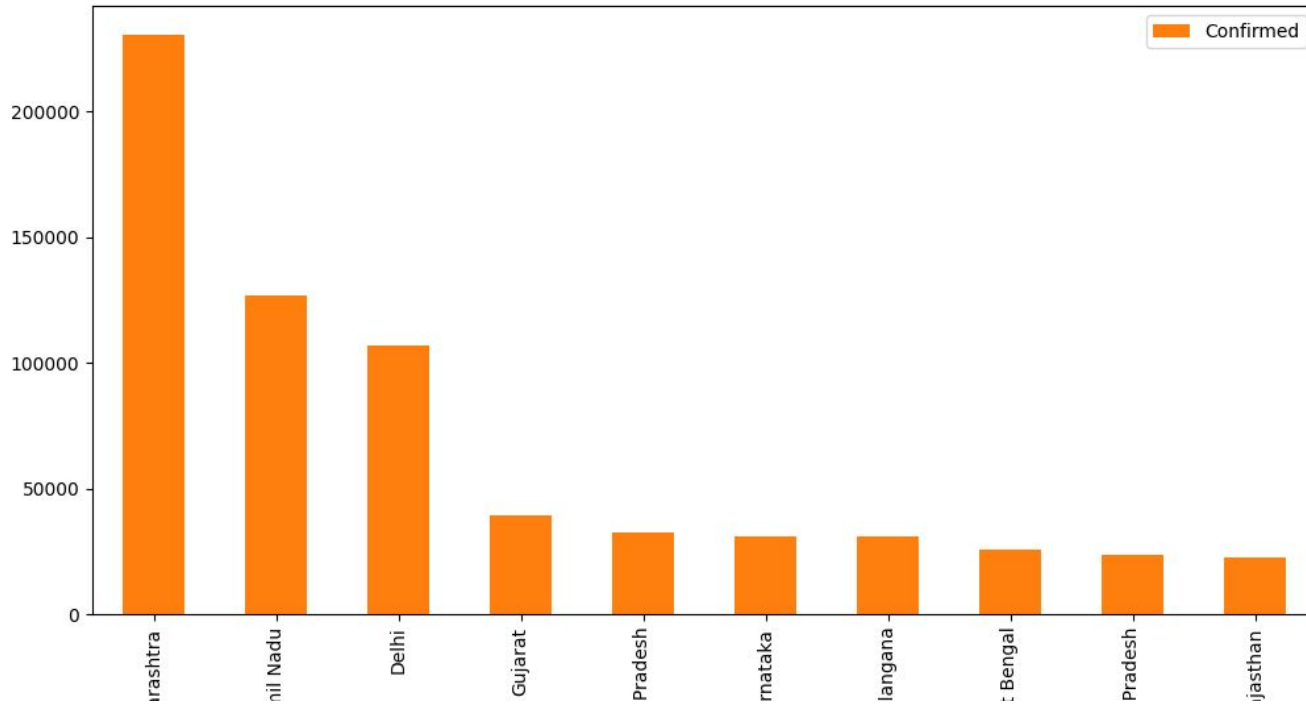Pranav Kanire   -190010033
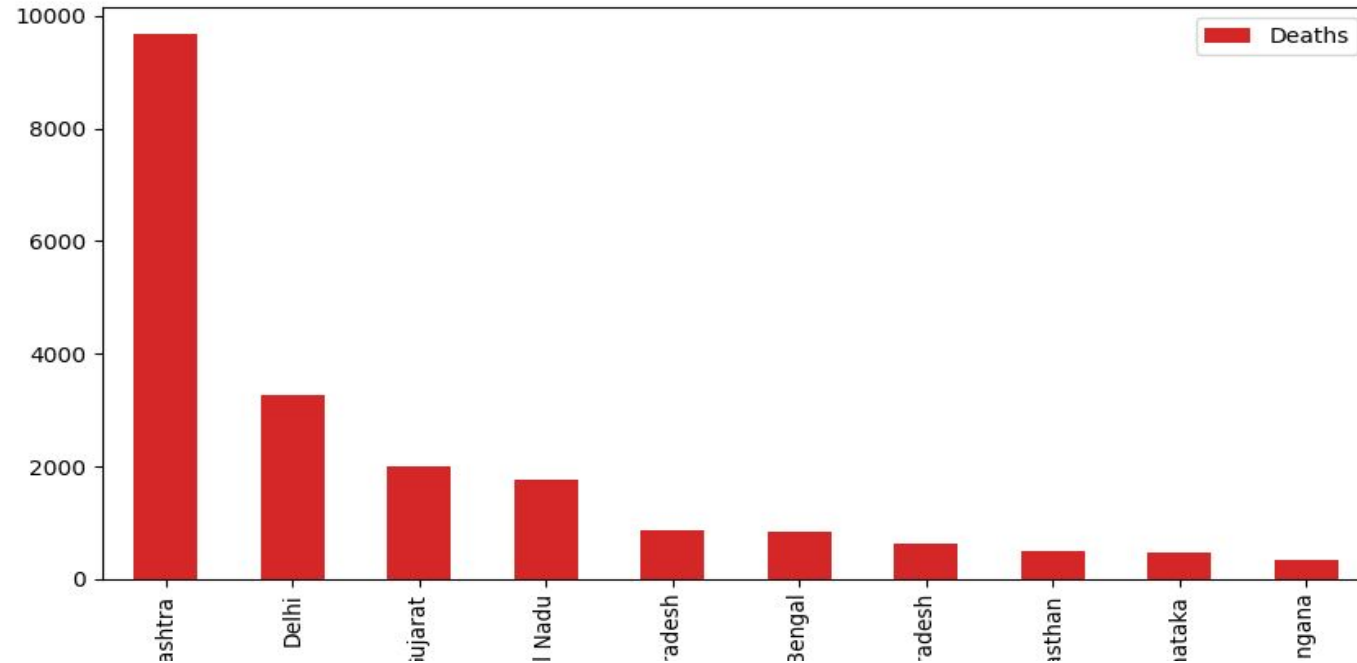G Hemanth   -190030016

PROJECT LINK

1) Which state has most number of confirmed cases?
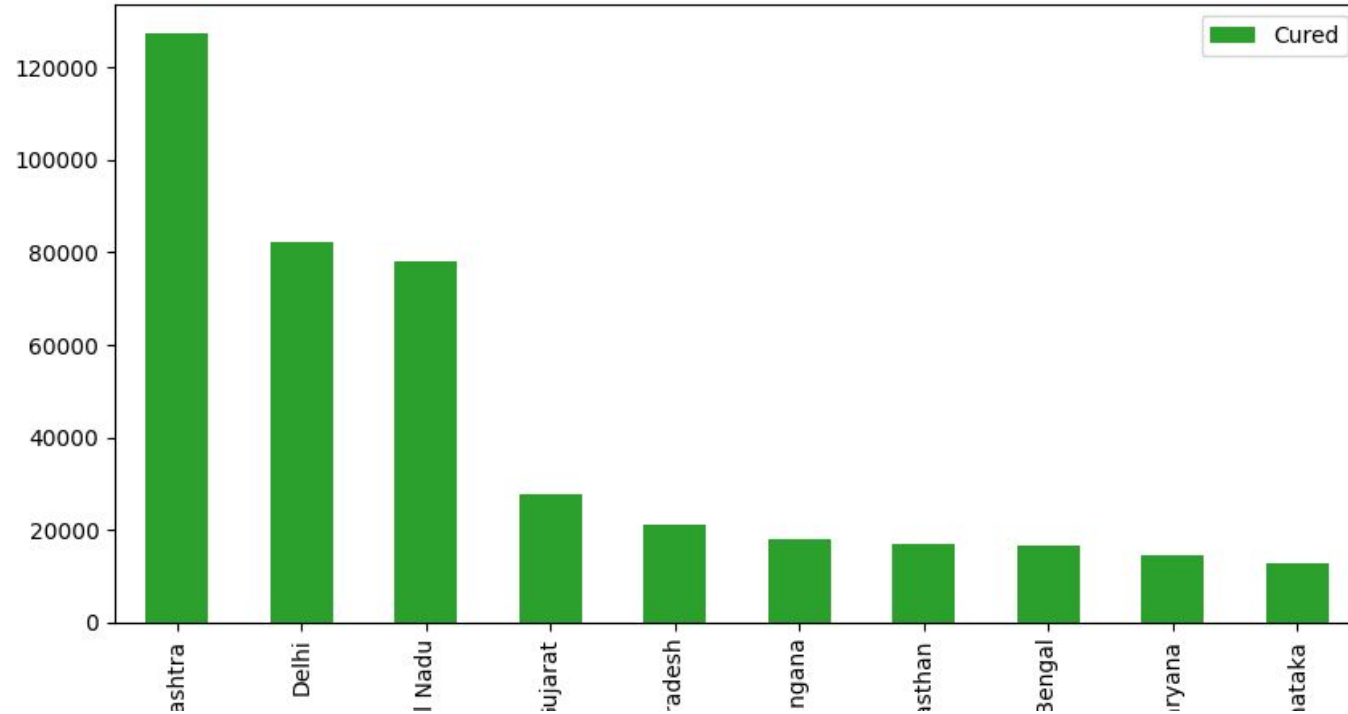
Ans) Maharashtra

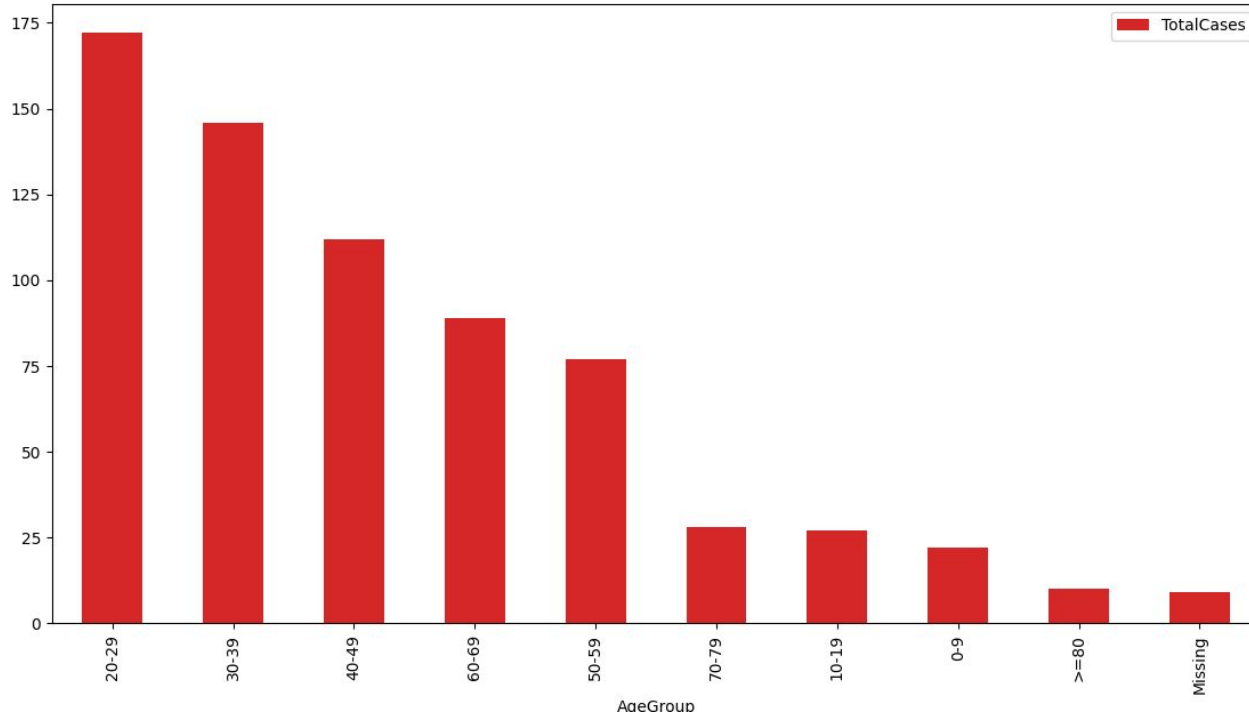2) Which state has the most no of death cases ?
 Ans) Maharashtra

3) Which state has the most no of cured cases?
Ans) Maharashtra
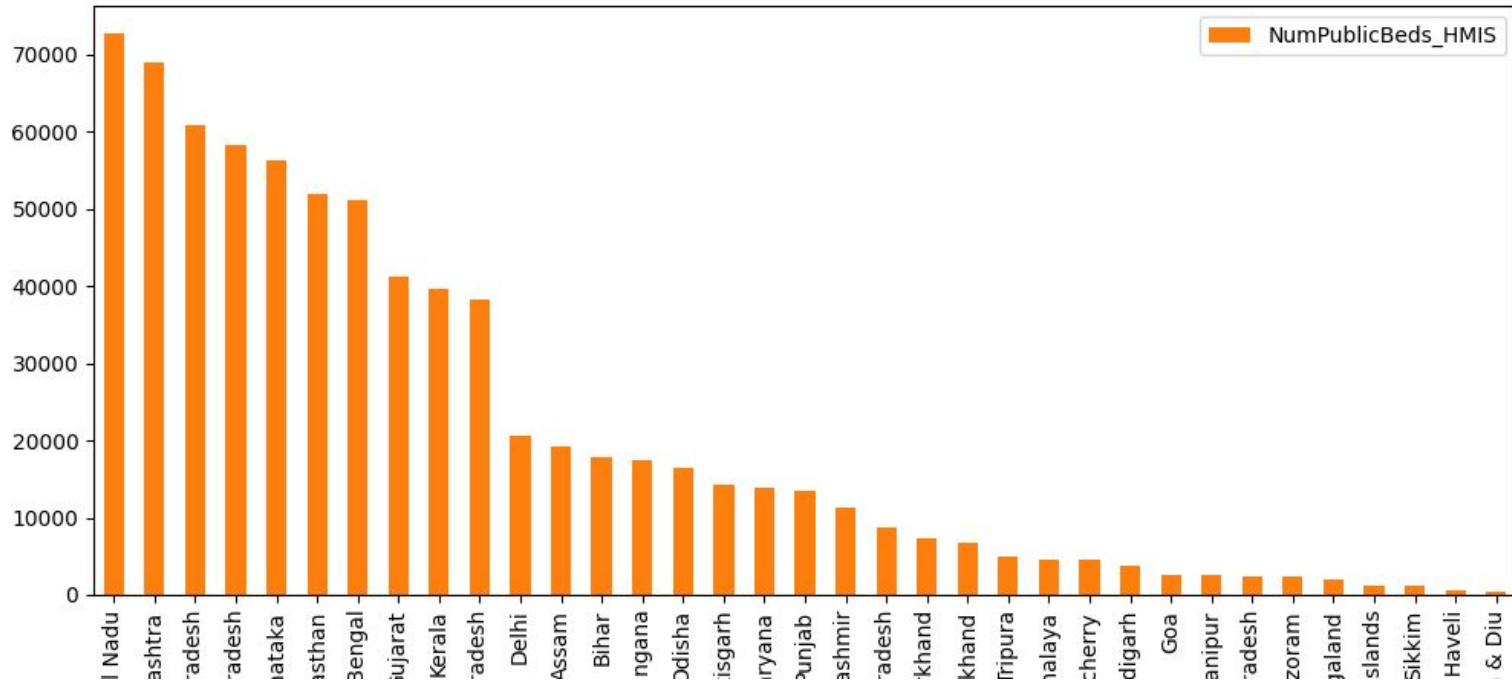
4) which age group has the higher chance of getting infected?
Ans) 20-29

5) Which state has the public health care facilities ?
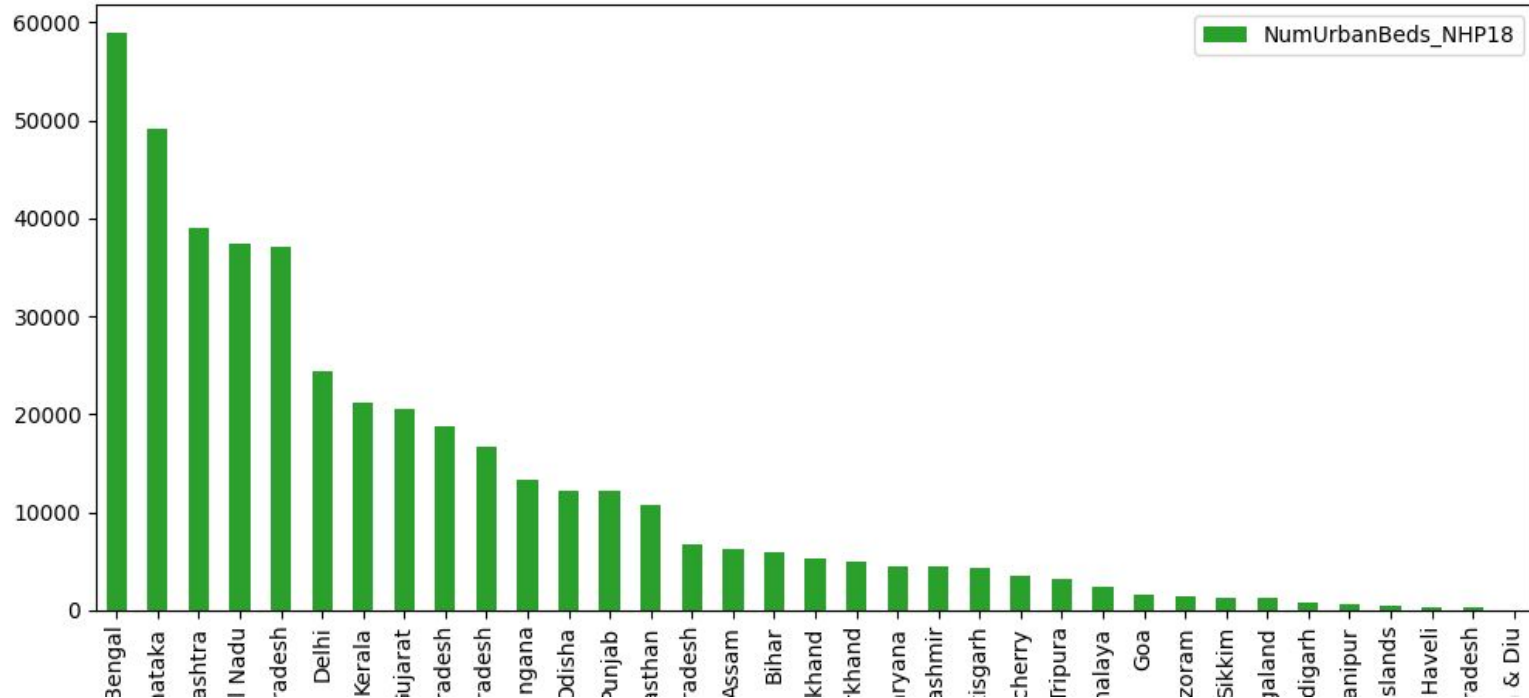Ans) Uttar pradesh

6) Which state has the higher number of public beds?
Ans) Tamil nadu

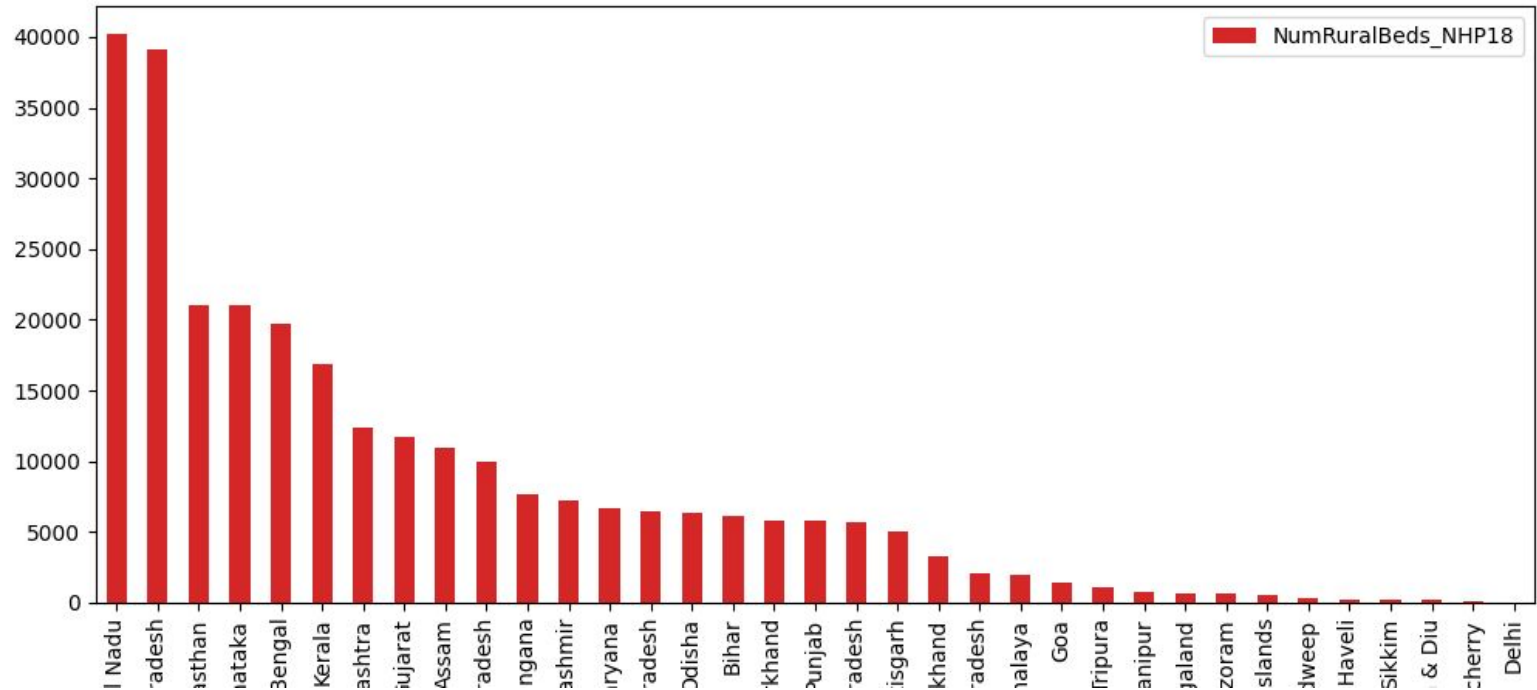7) Which state has higher number of beds available in urban areas?
Ans) West bengal

8) Which state has the most no of rural beds?
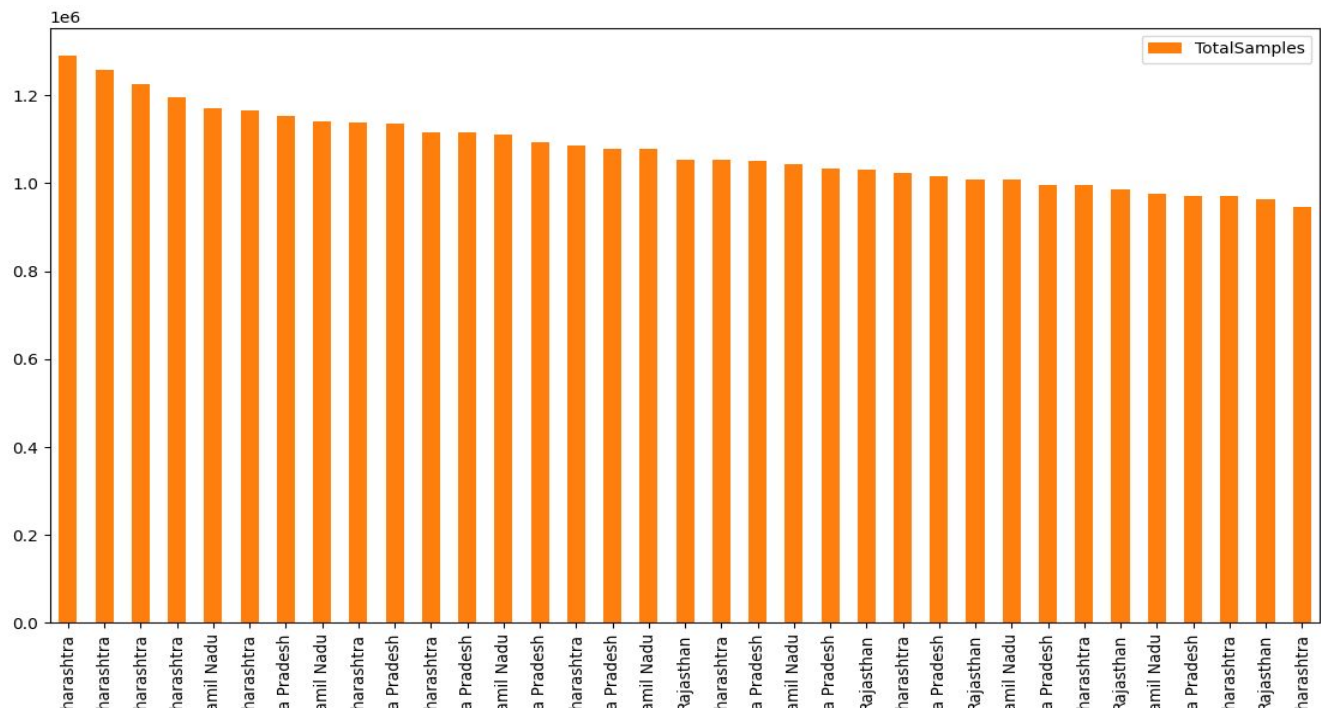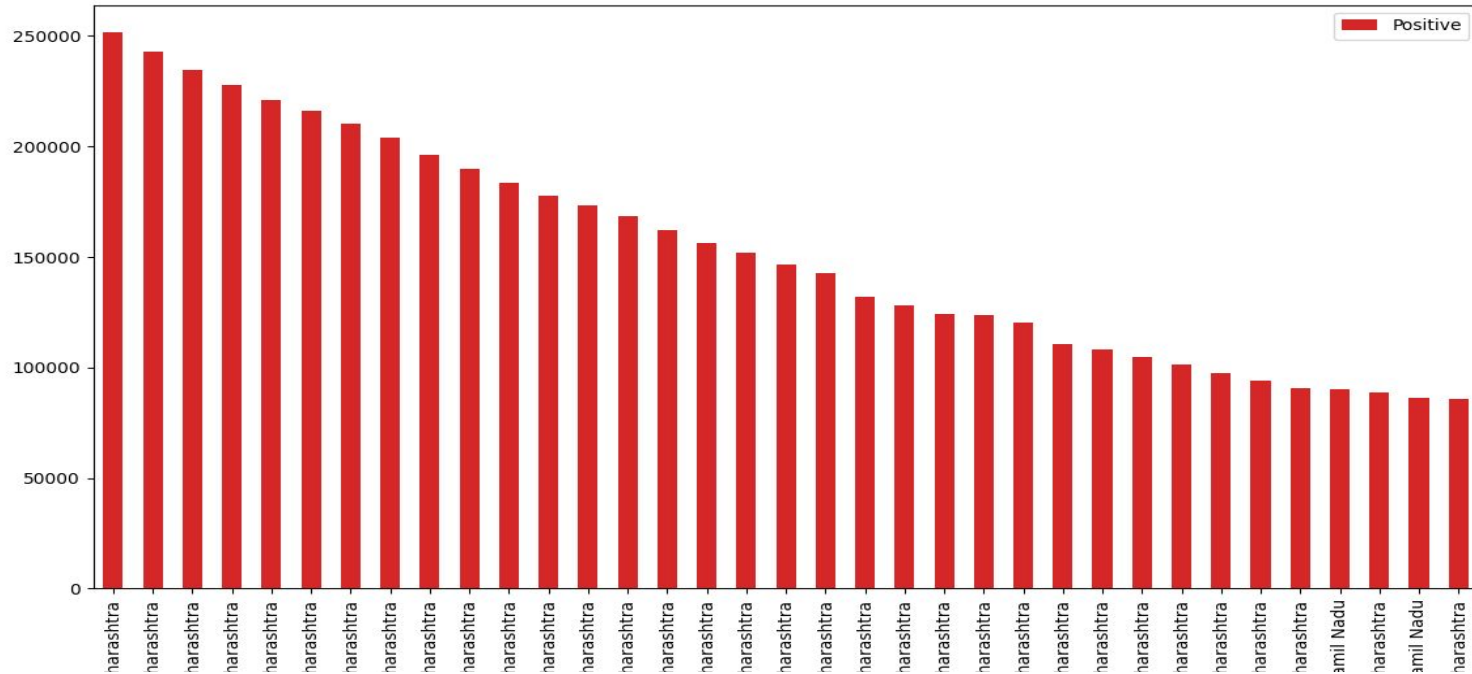Ans) Tamil nadu

9) Which state has the most number of samples tested on 12/07/2020?
Ans) Maharashtra

10) Which state has the most number of positive cases ?
Ans) Maharastra

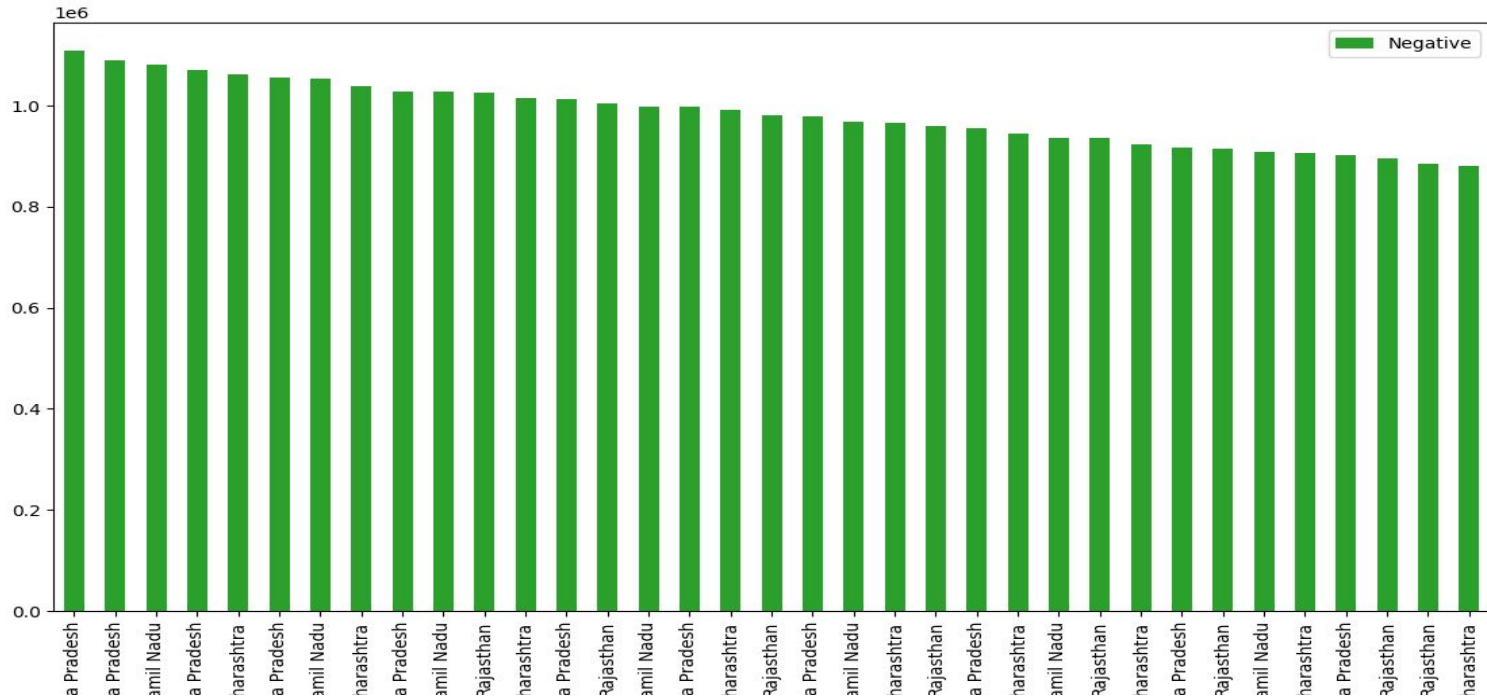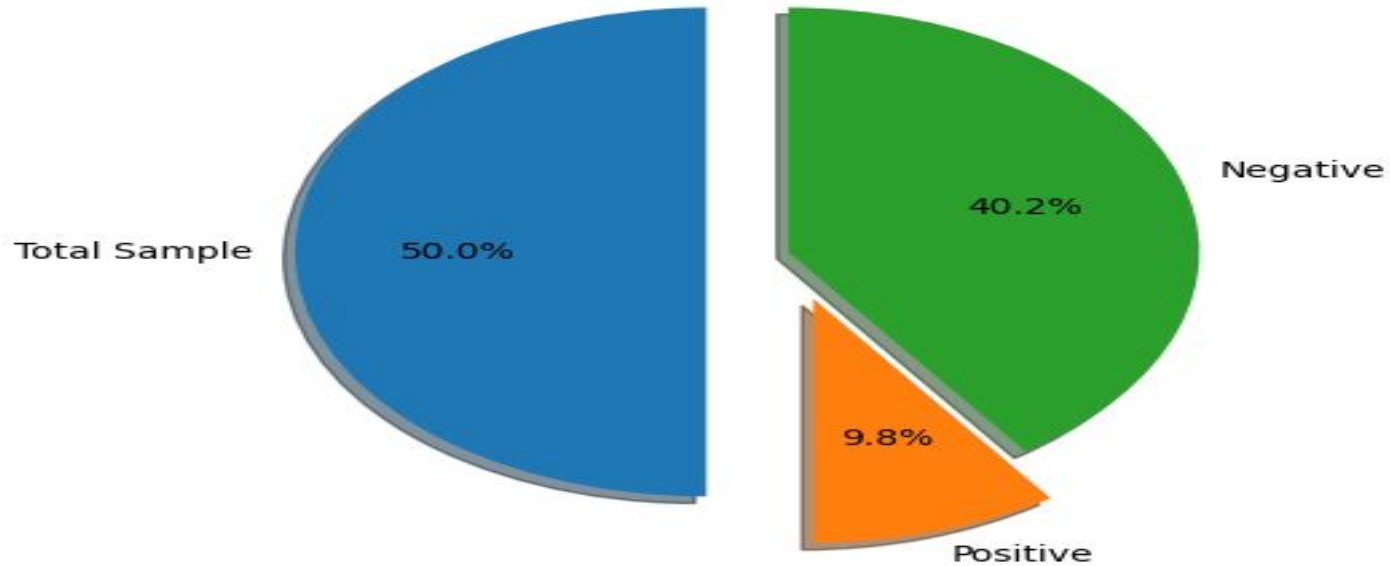11) Which state has the most no of negative samples?
Ans) Maharashtra

12) What are the percentages of total positive and negative cases?
Ans) positive percentage - 19.5985%
     Negative percentage - 80.401%

13) What is the percentage of Cured and deceased and active cases?
Ans) cured - 34.6% Deceased - 2.6% Active cases - 62.7%
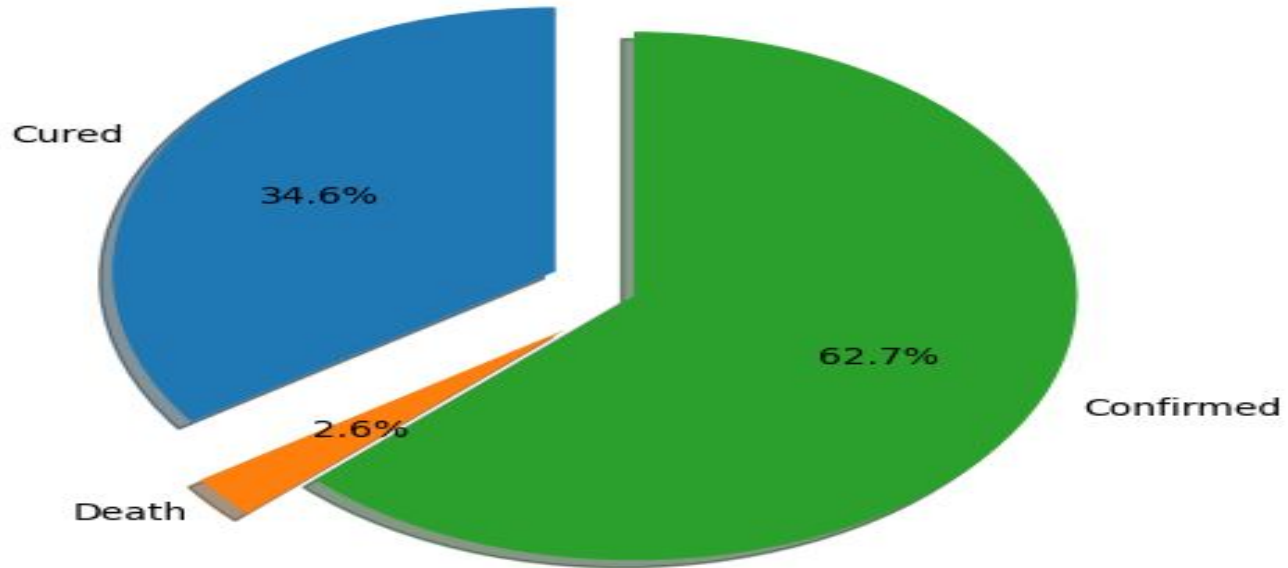
14) How are cases distributed in India?
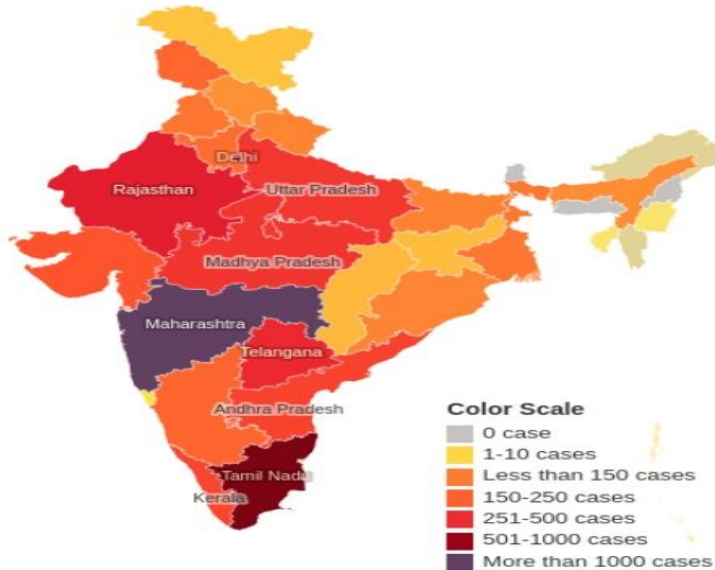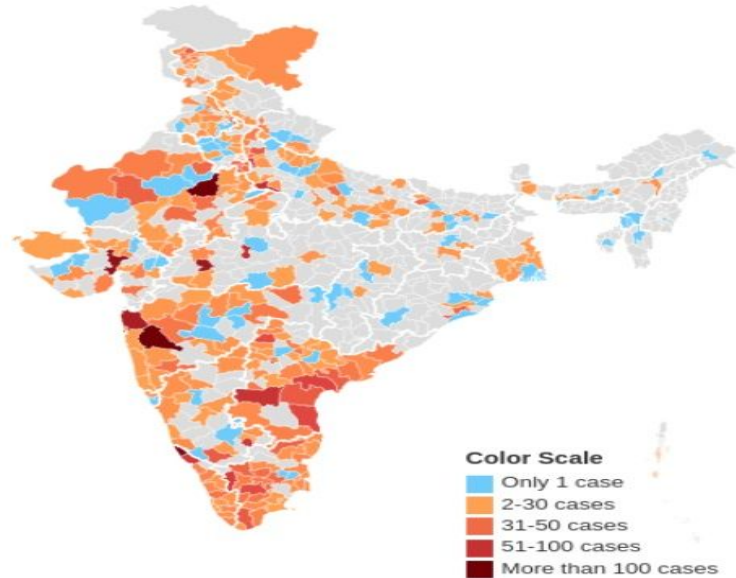
Hypothesis Testing

Here, we collected the whole data available to us for India and considered it as population.

Then from the data available we calculated population mean, which happened to be equal to 14901.94137

Then we randomly choose few states as samples and performed hypothesis testing on those.

Hypothesis

Here, our Null Hypothesis is:

H_0 : Population mean (μ) = Sample Mean (x)

    i.e., the samples are collected from the same population.

Thus, Alternative hypothesis becomes:

H_1 : Population mean (μ) ≠ Sample Mean (x)

    i.e., the samples are not from the given population.

T-test

Sample	Andhra Pradesh
mean	24973.7395
standard deviation	44896.57385
count	119
standard error of mean	4115.662177
degrees of freedom	118
hypothesized mean	14901.94137
t-statistic	2.447187764
p-value	0.01587096813
∝-value	0.05
Null hypothesis status	Rejected (∵ p < ∝)

Hypothesis testing (mean = 14901.94137) (null hypothesis : mean of sample = mean of population)

STATE		AP	Tamilnadu	GUJRAT	UP	WEST BENGAL
mean		24973.7395	69690.85246	24456.05	20218.39831	18247.75424
standard deviation		44896.57385	81203.65082	19427.32926	25201.84295	22730.6765
count		119	122	120	118	118
standard error of mean		4115.662177	7351.833108	1773.464412	2320.017694	2092.528383
degrees of freedom		118	121	119	117	117
hypothesized mean		14901.94137	14901.94137	14901.94137	14901.94137	14901.94137
t-statistic		2.447187764	7.452414966	5.387257033	2.291558786	1.598933085
p-value		0.01587096813	0	0.000000366379 9961	0.02372008193	0.1125325637
Null Hypothesis		rejected	rejected	rejected	rejected	accepted

CONTRIBUTION :

Srihari   -   Data collection

Yaswanth   -   Code execution

Dhanush   -   Data collection

Hemanth   -   Code execution

Hemanth kumar -   Hypothesis Testing

Pranav Kanire   -   Hypothesis Testing

THANK YOU