

APPLIED DATA SCIENCE 1

STUDENT ID: 21031334

NAME: KOTA VENKATAPATHI

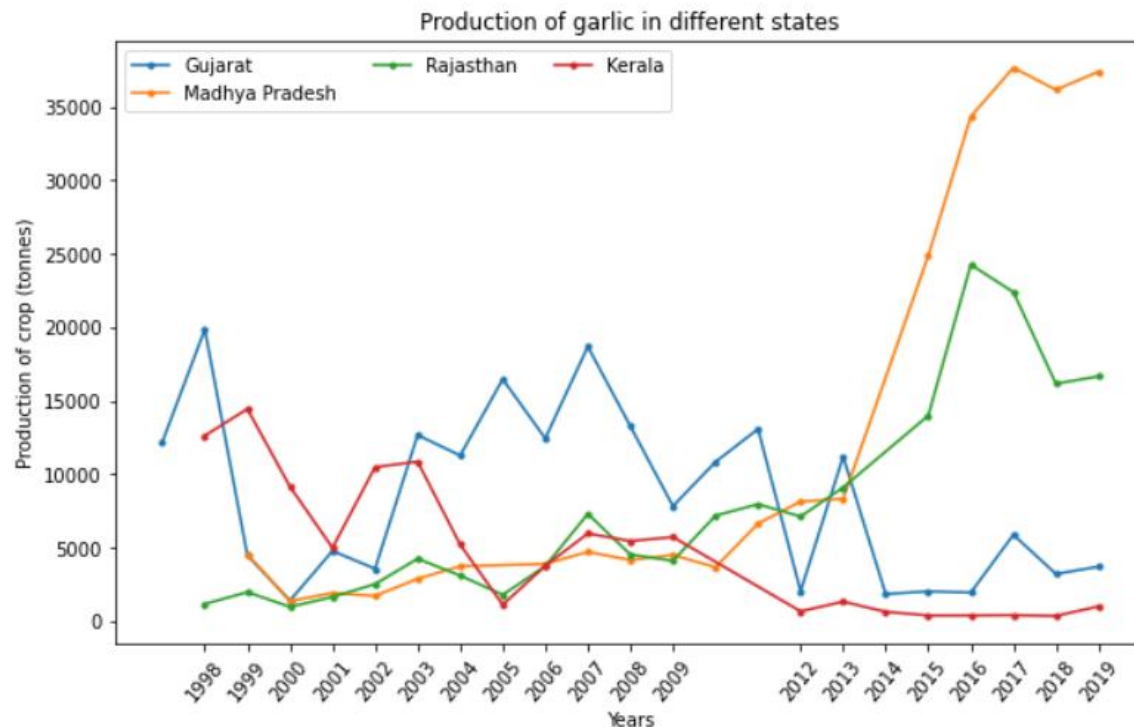
GITHUB REPO: <https://github.com/Venkatapathi1994/Applied-data-science.git>

Brief on Data used:

The data used for the assignment is crop production statistics in India.

The data consists of area of plantation, production quantity and yield for different crops in India from 1998 to 2019.

Visualization 1: Average Production Trends for garlic crop from different states



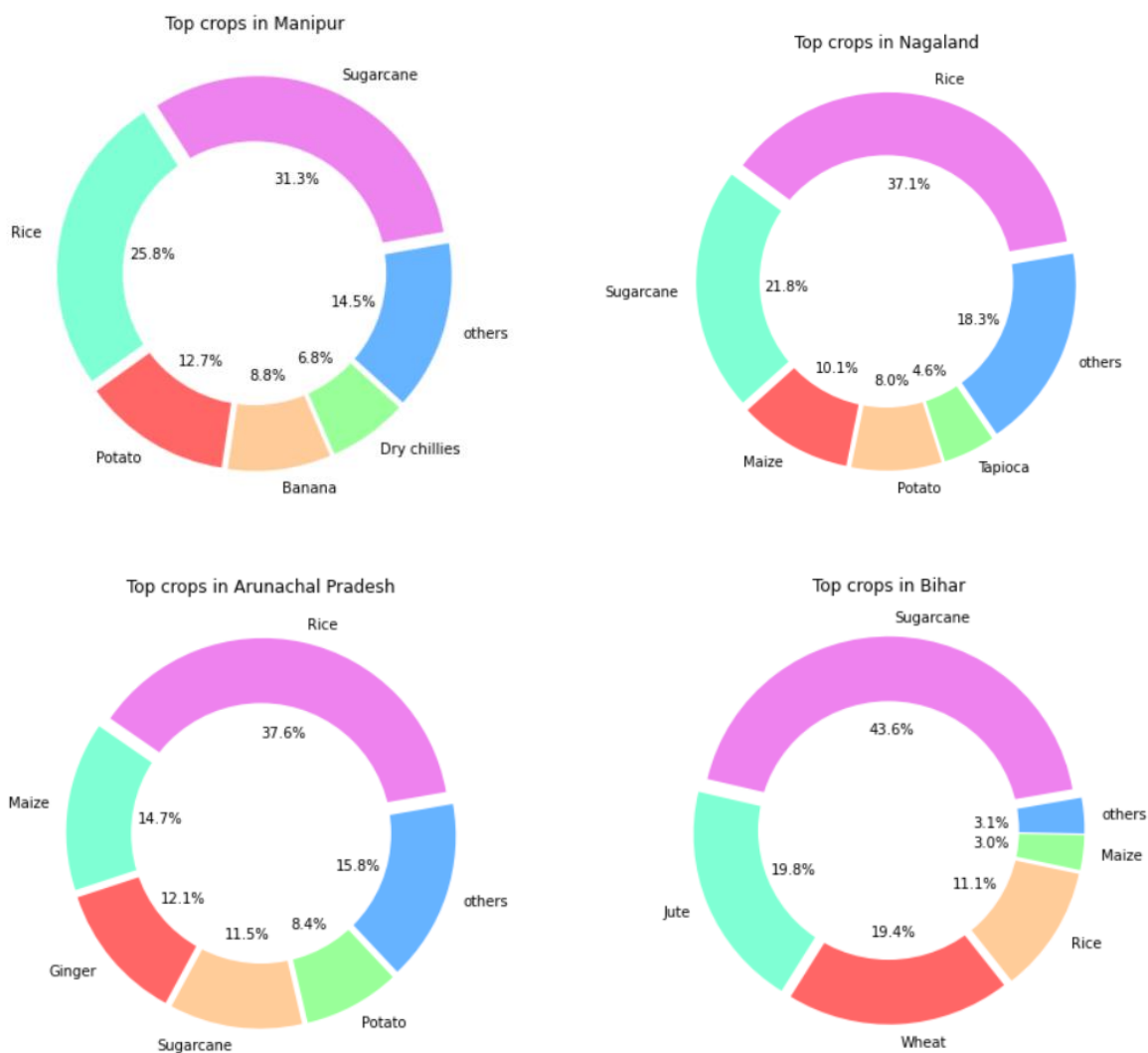
The line plots show us the trends of production of garlic over years for 4 different states in India namely Gujarat, Rajasthan, Kerala, Madhya Pradesh.

Observations:

1. The patterns observed here are interesting, we can see increasing, decreasing and sideways trends.
2. The mean production of garlic in Madhya Pradesh has been around 5000 to 1000 tonnes a year, but since 2013 the production sky rocketed and stands around >35000 tonnes a year

3. Rajasthan also showed an increase in the production but not in the same scale as Madhya Pradesh.
4. Kerala on the other hand has shown a downward trend in production of the crop from 15000 tonnes in 1999 to less than <2000 tonnes a year in 2019.
5. In Gujarat, the production seemed to be around 15000 tonnes through 2002 to 2011, but decreased post that, currently stands at ~4000 tonnes a year

Visualization 2: Crops grown in north eastern states of the country

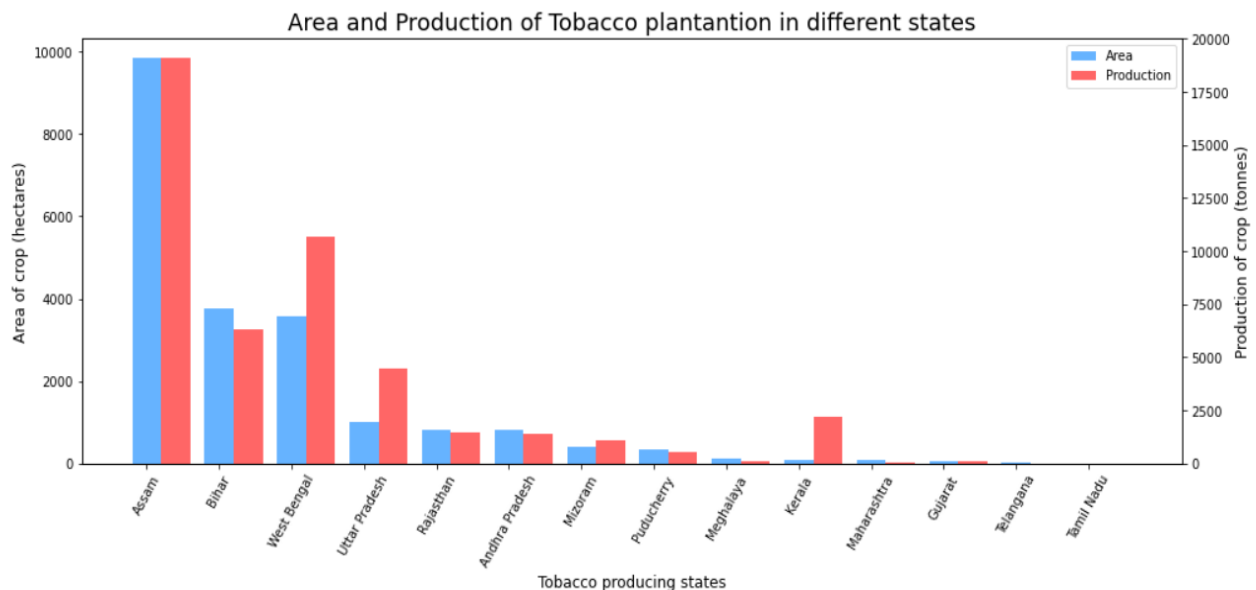


The pie plot representation shows us the details regarding the crops with highest produce in individual north-eastern states namely Manipur, Nagaland, Arunachal Pradesh, Bihar.

Observations:

1. Rice and Sugarcane are the most grown crops common to the 4 states with around 30-40% of total crop grown.
2. Ginger constitutes around 12% in Arunchal Pradesh which is not of the top 5 crops among other 3, similarly for Bihar we have Jute, Tapioca in Nagaland, drychillies and banana in Manipur.
3. Maize and Potato seems to be also mostly common between these states
4. In Bihar the top 5 crops constitute to 97% of the crop, mean

Visualization 3: States with max Tobacco Plantation and Production in the country



The MultiBar chart shows the Area of tobacco plantation vs Production of the crop across different states in India.

Observations:

1. The relation between the area of plantation and produce are not directly proportional
2. Out of 28 states tobacco only grows in 14 states
3. The north and north-eastern states mostly constitute the highest producers
4. Assam is the top producer of tobacco in the country in terms of both Area of plantation as well the production quantity
5. Kerala even with comparatively lesser Area of plantation, has higher produce than Rajasthan, Andhra Pradesh, Mizoram etc.