

CROP PRODUCTION AND MANAGEMENT

Predicting Best Crop in Andhra Pradesh - India

Agriculture

Growing plants and receiving animals for food , clothing, and other useful products is called agriculture.



Description

Crops - Plants of same kind grown on a large scale for food, clothing, etc., are called crops.

KHARIF CROPS - They are generally planted in June and harvested in October. Rice, maize, cotton and ground nuts are examples of kharif

RABI CROPS - They are generally planted in November and harvested in April. Wheat, barley ,pea and gram are examples of rabi crops.

Agricultural practices:-

1. Soil Preparation (Ploughing, Leveling, Applying fertilizers)
2. Selection and sowing of seeds
3. Irrigation (watering of crops)
4. Weeding and crop protection
5. Harvesting and storage

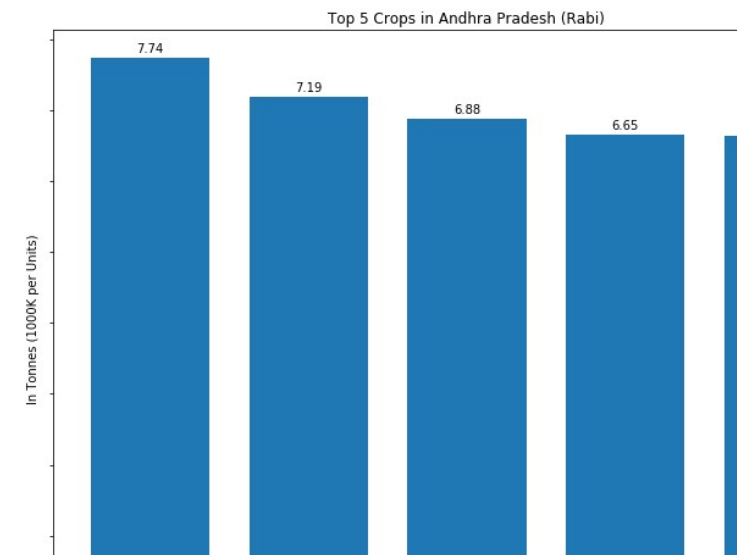
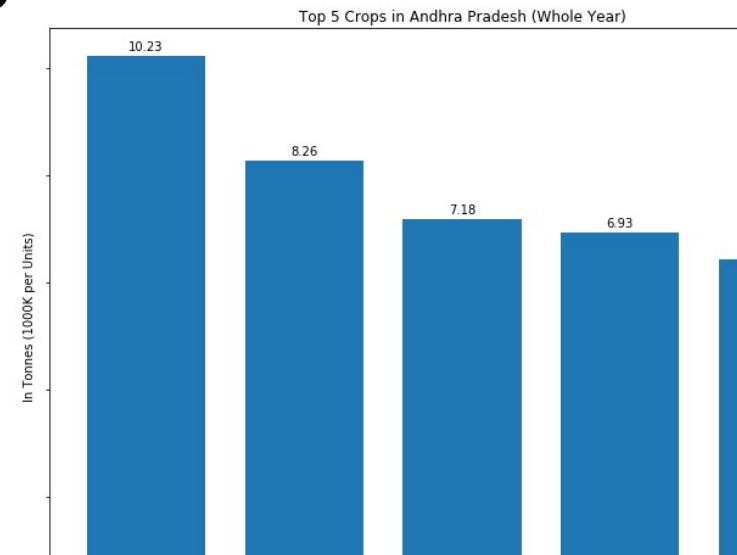
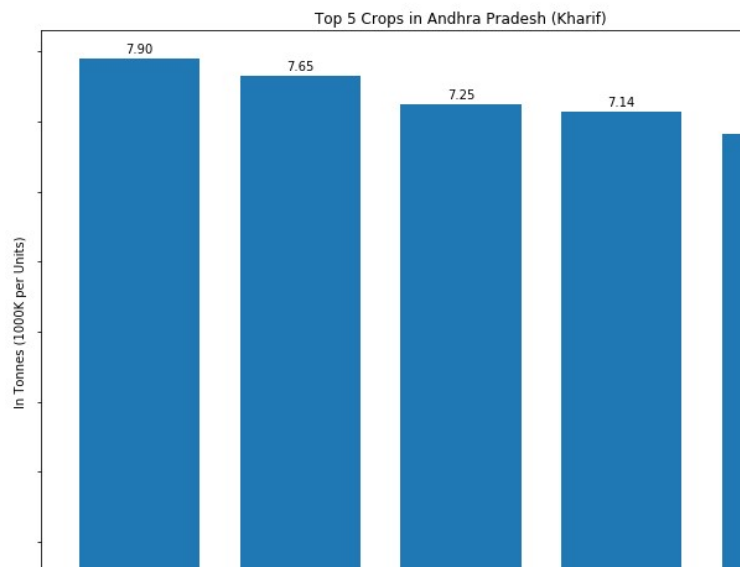
Selecting good-quality, healthy seeds is the next important of crop production.

Data acquisition and cleaning

- Crop dataset from <https://data.gov.in/resources/district-wise-season-wise-crop-production-statistics-1997>
- The data refers to district wise, crop wise, season wise and year wise data on crop covered area and production (1997-2012)
- The data is being used to study and analyze crop production, production contribution to district/State/country, Agro-climatic zone wise performance, and high yield production order for crops, crop growing pattern and diversification.
- One state will be analyzed in this project: **Andhra Pradesh**
- Data set for the Andhra Pradesh contains a total of **9628** records with **7** features for different districts.
- Using Foursquare API we will find all geographical coordinates of each State.

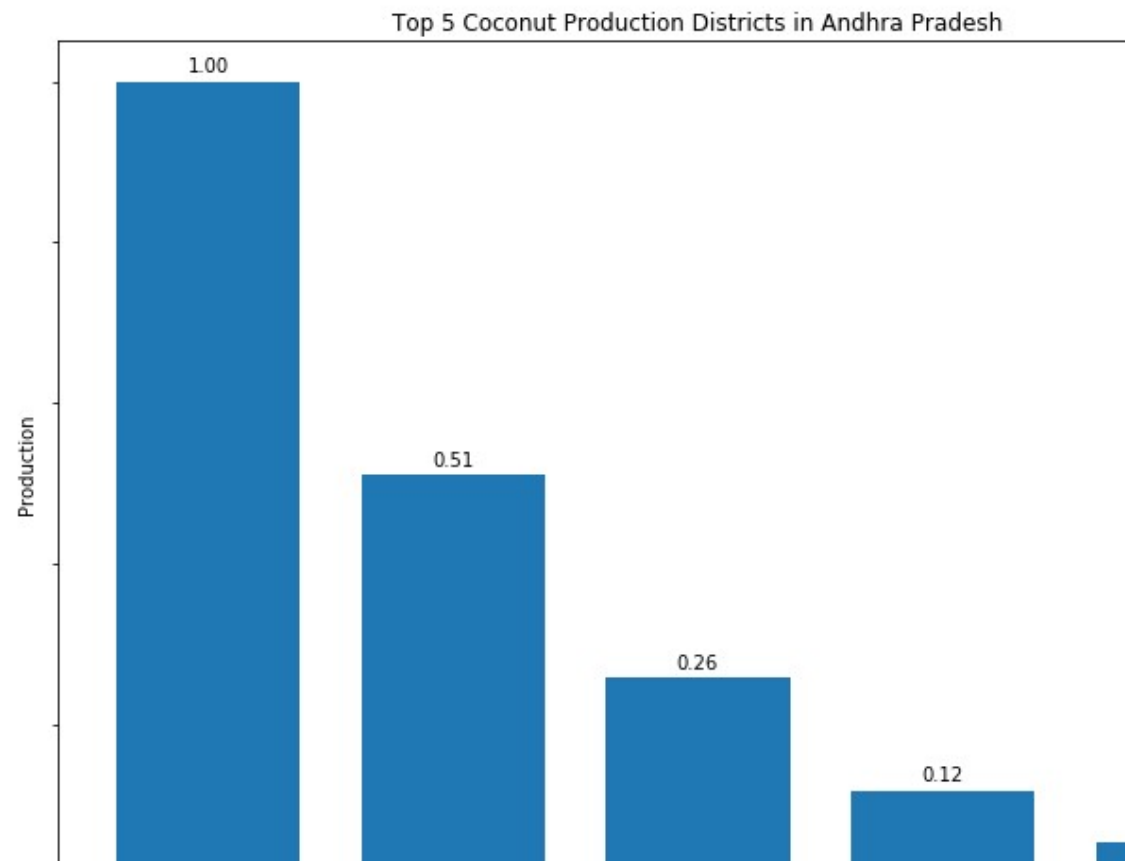
Analysis Results

- Top 5 Crops in AP Whole
 - Year
 - Kharif
 - Rabi



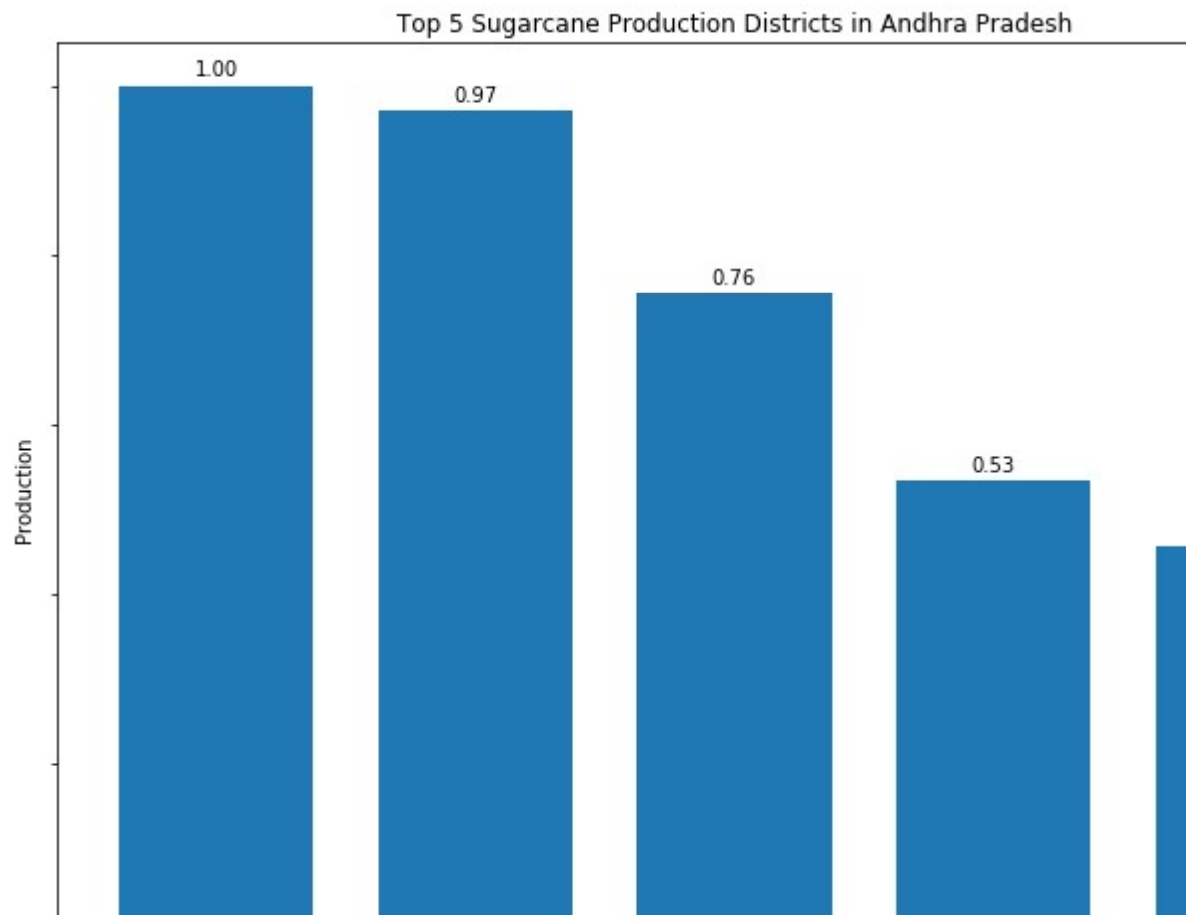
Analysis Results1

- Top 5 Districts in Coconut production in AP



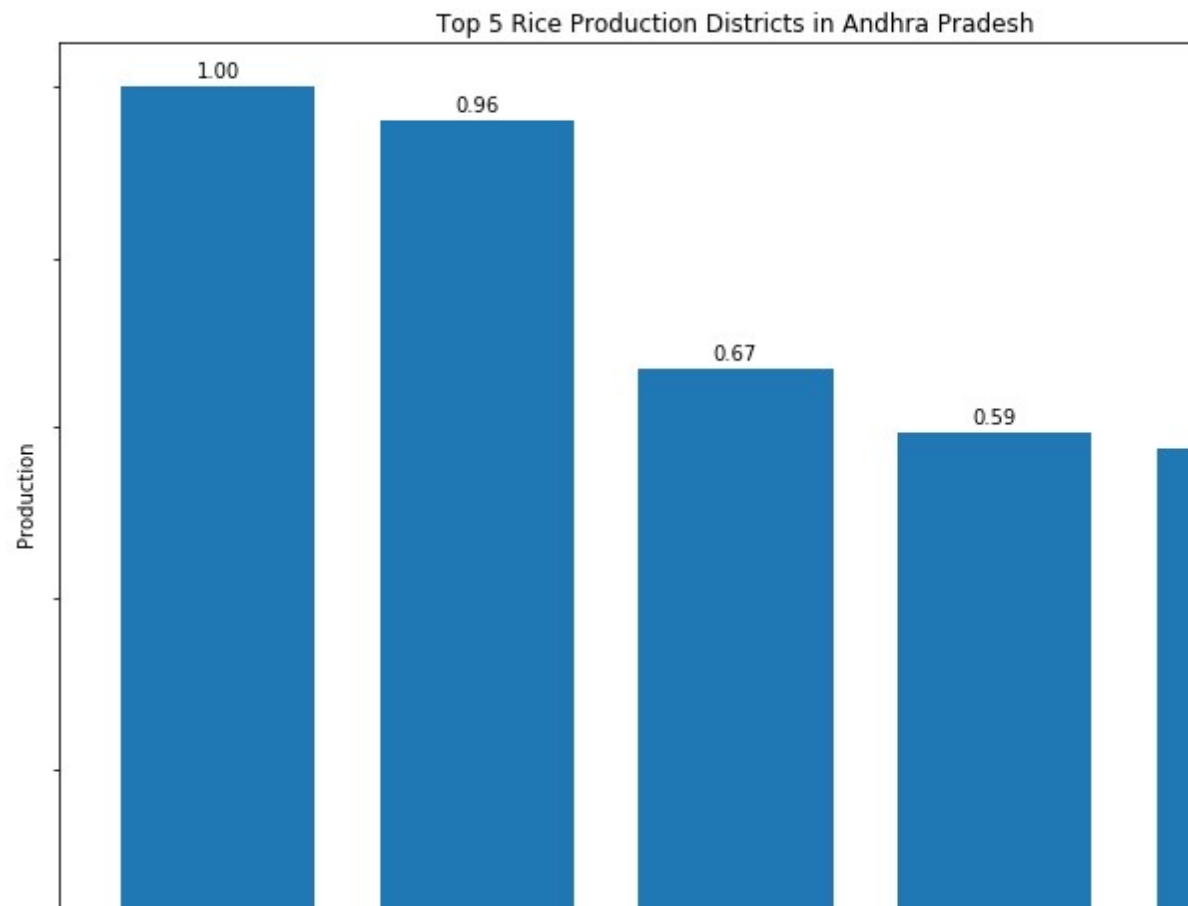
Analysis Results 2

- Top 5 Districts in Sugarcane production in AP



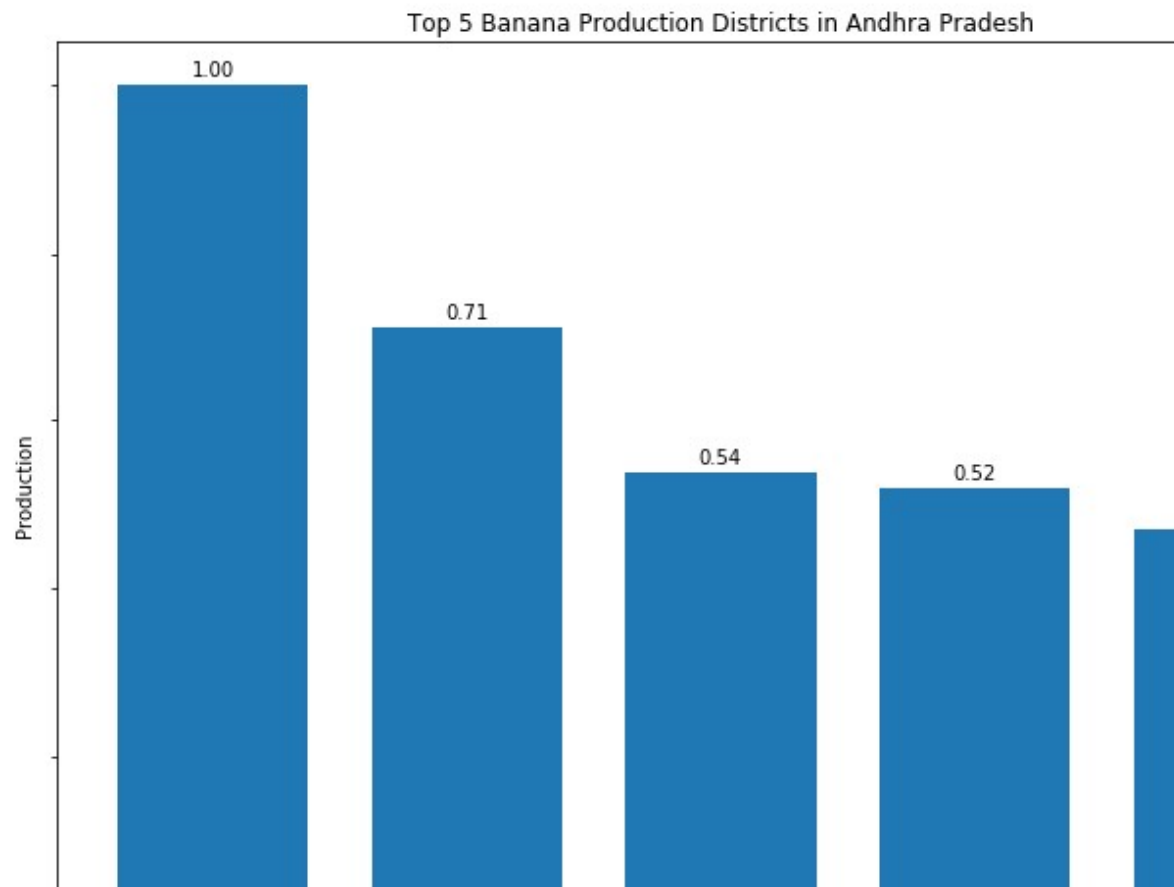
Analysis Results 3

- Top 5 Districts in Rice production in AP



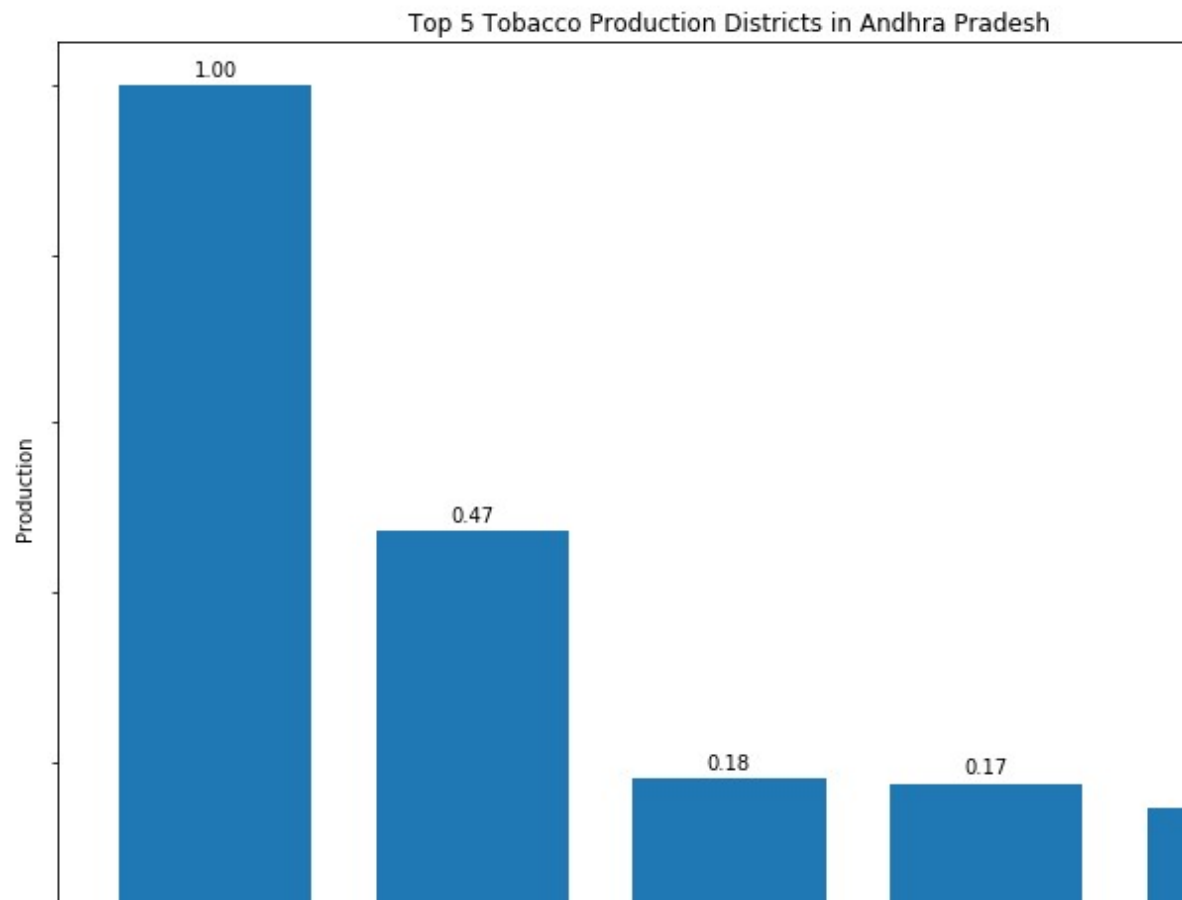
Analysis Results 4

- Top 5 Districts in Banana production in AP



Analysis Results 5

- Top 5 Districts in Tobacco production in AP



Conclusion and future directions

- Built useful models to predict best suitable crop in selected location.
- Accuracy of the models has room for improvement.
- Capture more data for the on monthly/season bases from each district of each state in India.
- Ideas include:
 - Weather forecast data (wind speed, weather condition, etc.)
 - Soil test data (what kind of minerals, fertilizers, etc.)