CROP RATE PREDECTION

QIS COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous)
(Approved by AICTE and Permanent Affiliation to JNTUK)
(NAAC 'A+' Grade & Thrice Accredited by NBA, New Delhi)
Vegamukkapalem, Ongole-523272, Andhra Pradesh.

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(An ISO 9001:2015 Certified Institution)

VENGAMUKKAPALEM, ONGOLE-523272, A.P., INDIA

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Community Resource Project entitled "CROP RATE PREDECTION" is a record of the boneheaded work done by **B.SUBBAIAH(20491A05T1), B.SAI SUMANTH (20491A05T0), L.ANAND BABU (20491A05T2), R.RAGHU BABU (20491A05T3)** submitted in partial fulfillment of the requirement for the award of degree of Bachelor of Technology in COMPUTER SCIENCE AND ENGINEERING with specialization of **"MEACHINE LEARNING AND WEB DEVELOPEMENT"** for the academic year **2020-2024.** This work is carried outunder my supervision and guidance.

Signature of the Project Guide
Dr.T.SUNITHA M. E., Ph.D.
Associate professor

Signature of Head of theDepartment
Dr.D.Bujji Babu M. Tech., Ph.D.
Head of the Department

Signature of the Director of DPR

Abstract

Price prediction of agricultural commodities is the essential requirement for the sustainable development of the farming community. This forecasting methodology is very important for sustainability of farmers. The accurate forecasting of agricultural prices will help in taking better decisions which results in minimizing the loss and managing the risk of price fluctuations. This methodology provides valuable insights that can help the farmers to reduce cost, restrict the use of chemical fertilizers, increase revenue, understand the seasonal trend demand, etc., We focus on the short-term and long-term forecasting of agriculture commodities prices. We will develop independent advanced forecasting models using time-series analysis like SARIMA, Deep AR for accurate price prediction of agricultural commodities.

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MOTIVATION

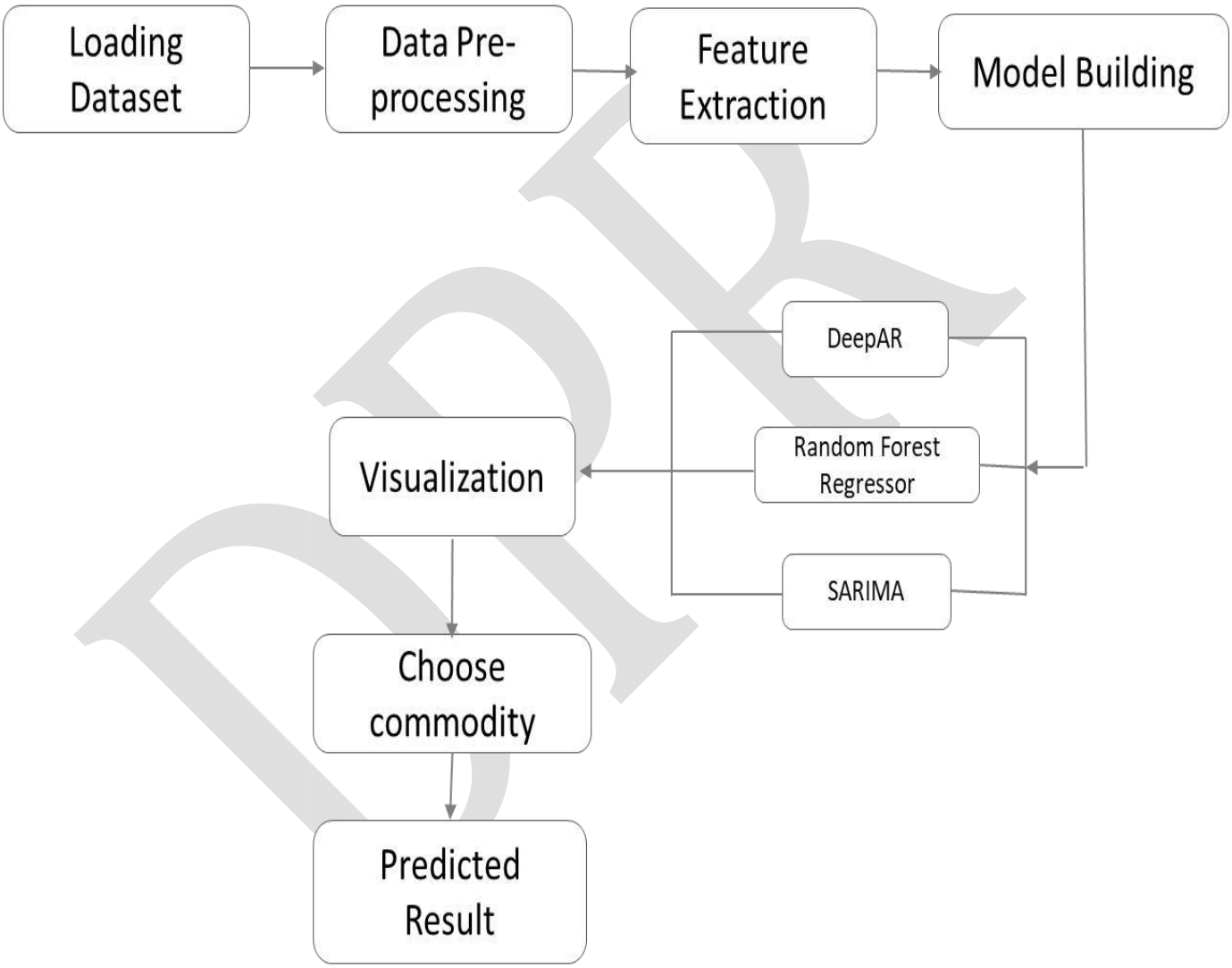
- To provide accurate and timely price forecast by taking into account (Local information to the farmers, traders and policy makers) so that they can make production, marketing and policy decisions well in advance.
- The ability to predict crops before the start of the crop season.
- It'll be a risk for farmers to grow any crop without foreseeing the demand,price etc.
- Due to significant economic effects of agricultural commodities price forecasting, many techniques have been investigated, statistical approaches like support vector machines(SVM) and ARMA (auto regressive moving average).By using Time Delay Neural Network(TDNN), a special form of ANN; provided inconsistent results while dealing with seasonal datasets.

Tools & Technologies

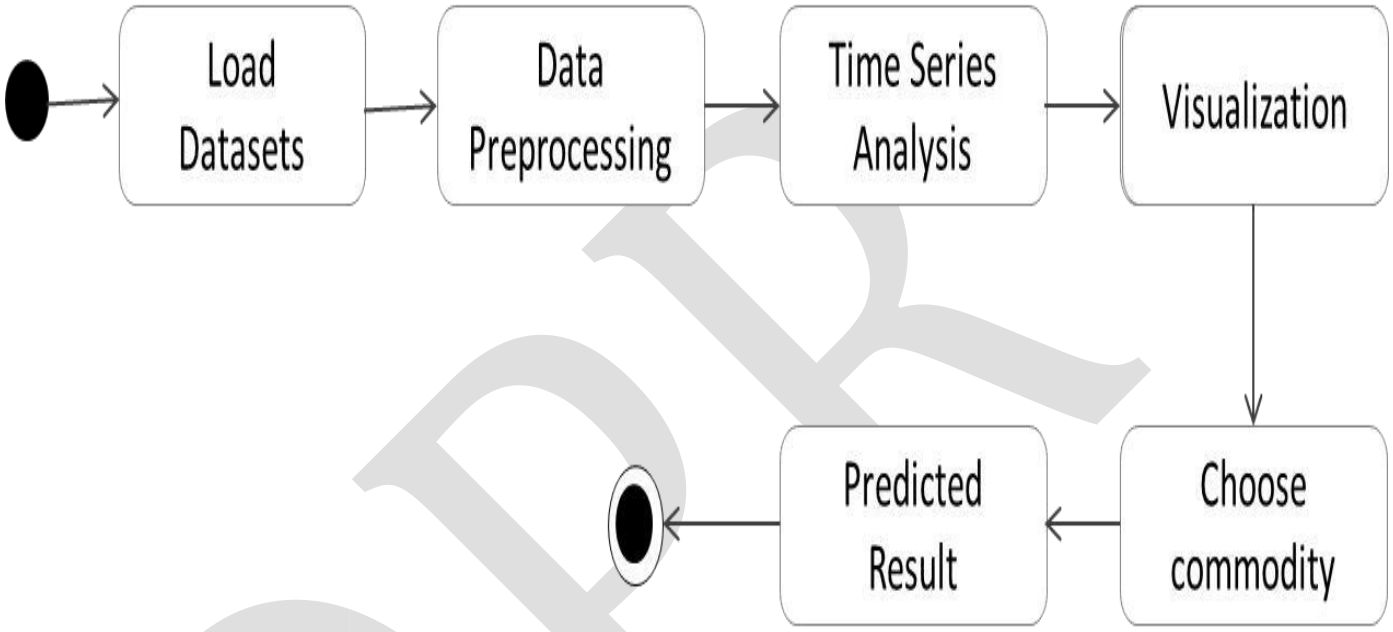
MINIMUM SOFTWAREAND HARDWARE REQUIREMENTS:

- Anaconda :3.7
- Operating system : windows, Linux
- Processor : intel i3
- Ram : 4gb
- Hard disk : 250gb
- Frontend Framework : Flask

Workflow



State Chart Diagram



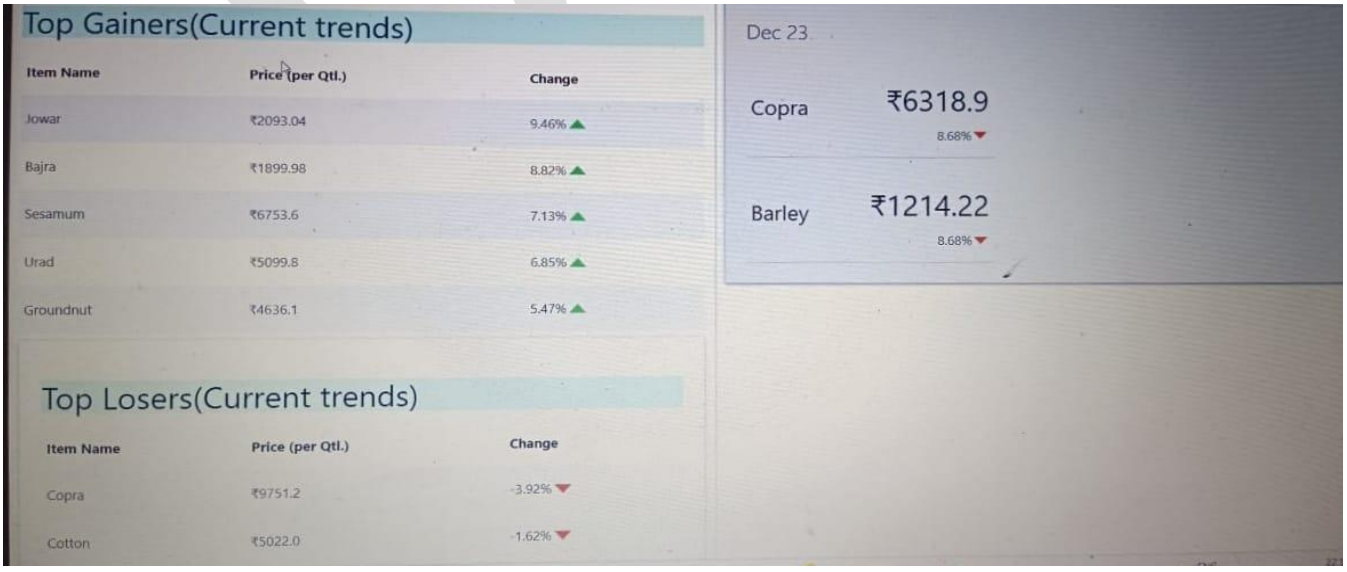
PROPOSEDWORK:

- Agriculture and cultivation have been part of human civilization for centuries and is evolving with technology, giving rise to smart farms.
- In the present era of globalization, management of food security in the agriculture dominated developing countries like India needs efficient and reliable food price forecasting models more.
- Currently, India is ranked second in the world for production of agricultural commodities and contributes almost 18% in the Indian GDP.
- Based on a forecast, the insurance companies and government can support the farmers financially by providing insurance policies and loans at affordable interest rates.
- The prices of crops are volatile, especially for tree crops and the crops cultivated annually. Unpredictable events such as drought and flood can affect the prices of agricultural commodities, thus affecting the entire market; the farmers, suppliers, exporters, and stakeholders face huge losses.

Components used and budget

S.No	Component/Software Used	Specification	Cost/Hosting Cost in case of web based application (Rs.)*
1	Anaconda	3.7	free
2	Operating systems	Windows, Linux	free
3	processor	Intel i3	free
4	ram	4gb	free
5	Front end framework	Flask	free
Total			

OUTPUT



Photograph of the prototype/web page/Application

L.ANANA BABU

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B.SAI SUMANTH

B.SUBBAIAH

CONCLUSION

* Forecasting agricultural commodities prices 1 hour,1 day ahead and 1 week ahead for shortterm forecasting and long-term forecasting covering monthly and yearly forecasts which has adverse effects on farmers, stake holders .etc