

# AskAgri Crop Consultant

**Presented by: Shreya Jayant**  
**(181249, CS 62)**

An orange speech bubble with a tail pointing downwards and to the left, containing the text "Predicting Crop Yield using ML".

Predicting Crop Yield using ML

# Discussion Structure

- 1 Introduction
- 2 What is this project?
- 3 The Process
- 4 The end result

“

**Farmers are the  
cultivators of earth.  
They sustain life on this  
planet.**

”

# Introduction

- Agriculture plays a critical role in the global economy.
- Understanding worldwide crop yield is central to addressing food security challenges and reducing the impacts of climate change.





# Why focus on this project?

- Crop yield prediction is an important agricultural problem.
- The Agricultural yield primarily depends on weather conditions (rain, temperature, etc), pesticides.
- Accurate information about history of crop yield is important for making decisions related to agricultural risk management and future predictions.





# What is it about?



Taking top 10 most consumed crops



Regression Problem.



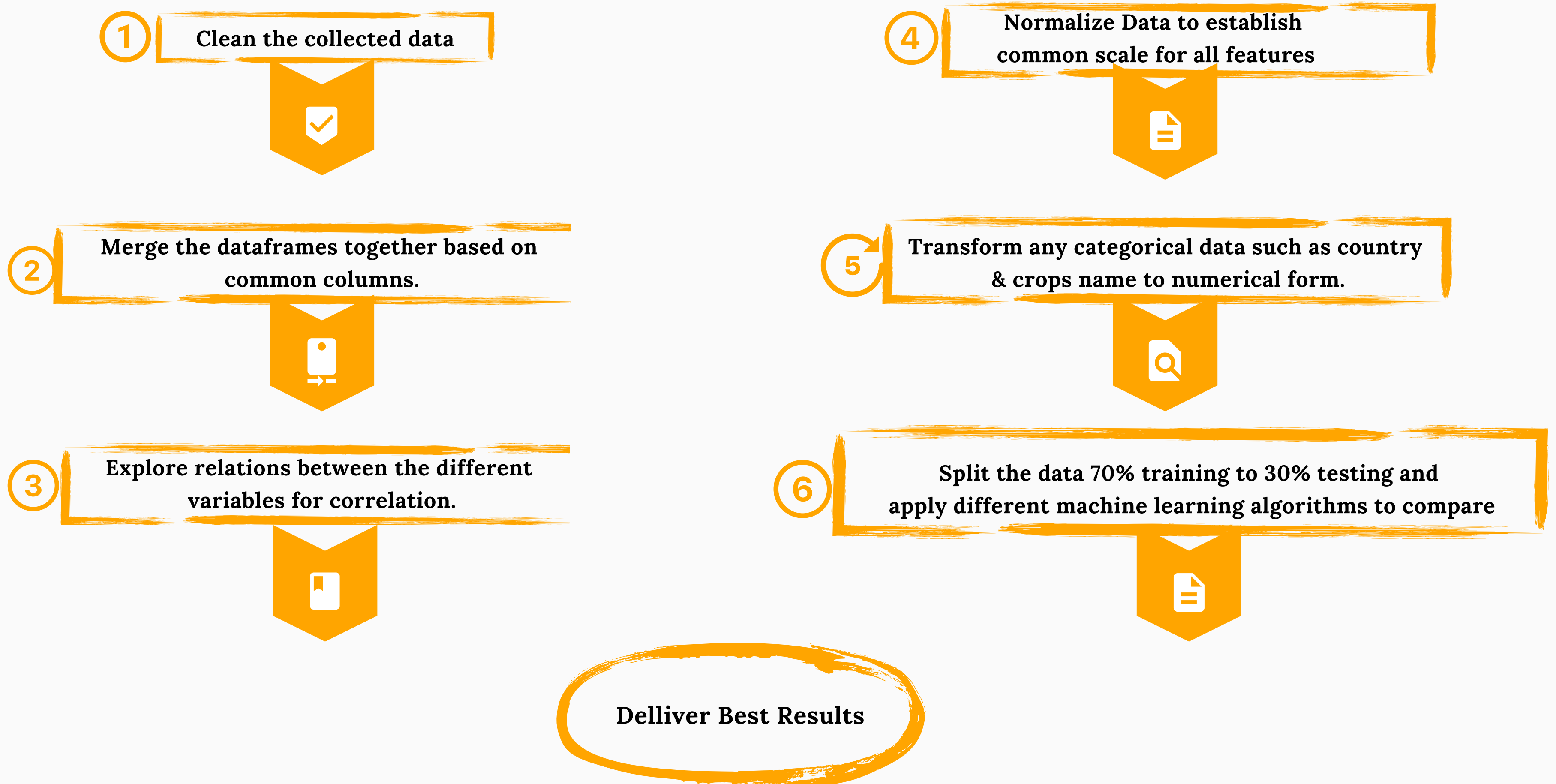
Historical patterns and Info can be converted into knowledge and future trends.



Goal is to predict crop yields from topmost consumed crops.



# The Process



# Requirements

- 1 NumPy, Pandas (n-d arrays, dataframes)
- 2 matplotlib (visualizations)
- 3 scikit-learn (for predictions algorithms)
- 4 seaborn, pydot graphviz (visualization)



# Schedule

**Month 1**

Read about the topic and work on the dataset.

**Month 2**

Correlation and prediction visualizations

**Month 3**

Training and testing and deployment

**Month 4**

Take feedback and future improvements

# Code Snapshots

AskAgri: Minor Project x Shreya869/Ask-Agri: Minor Project x Machine-Learning-Cap x AskAgri\_minor.ipynb x How to select rows from a DataFrame x yield hg/ha meaning x

colab.research.google.com/drive/1uDzVrrFW-6Mnu4z3tYDmuTZJEqFCIOJu#scrollTo=eR8z2zYIBccd

Codechef Product Manageme... MBA GMAT Prep AmazeWow April 2... Atom Programming - Inte... MUSST SEE Career Opportuniti... Jupiter 5 Data Science Projects

AskAgri\_minor.ipynb

File Edit View Insert Runtime Tools Help

+ Code + Text

df\_new = df\_new.drop(['Year Code', 'Element Code', 'Element', 'Year Code', 'Area Code', 'Domain Code', 'Domain', 'Unit', 'Item Code'], axis=1)  
df\_new.head()

	Area	Item	Year	Value
24489	India	Cassava	1961	71861
24490	India	Cassava	1962	71396
24491	India	Cassava	1963	71134
24492	India	Cassava	1964	115697
24493	India	Cassava	1965	126375

[16] df\_new.describe()

	Year	Value
count	448.000000	448.000000
mean	1988.500000	64607.281250
std	16.181299	79289.488015
min	1961.000000	4288.000000
25%	1974.750000	10115.750000
50%	1988.500000	24840.000000
75%	2002.250000	88248.000000

Activate Windows  
Go to Settings to activate Windows

AskAgri\_minor.ipynb

File Edit View Insert Runtime Tools Help All changes saved

+ Code + Text

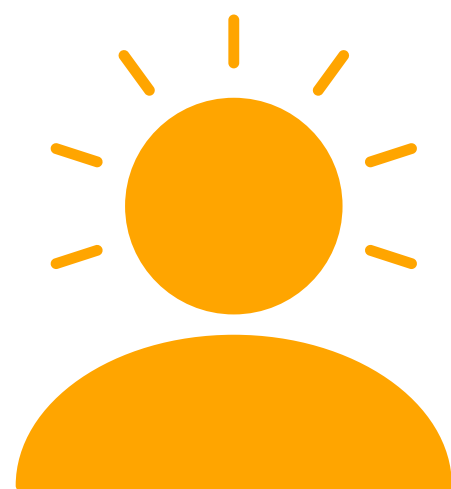
df\_new.describe()

	Year	Value
count	448.000000	448.000000
mean	1988.500000	64607.281250
std	16.181299	79289.488015
min	1961.000000	4288.000000
25%	1974.750000	10115.750000
50%	1988.500000	24840.000000
75%	2002.250000	88248.000000
max	2016.000000	385818.000000

[17] df\_new.info()

```
<class 'pandas.core.frame.DataFrame'>  
Int64Index: 448 entries, 24489 to 24936  
Data columns (total 4 columns):  
#   Column  Non-Null Count  Dtype  
---  ---      -  
0   Area    448 non-null    object  
1   Item    448 non-null    object  
2   Year    448 non-null    int64  
3   Value   448 non-null    int64
```

# THE END RESULT



**Awareness**



**Security**



**Accessibility**



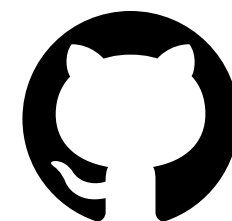




Thank you!



LinkedIn



Github



**jayant.shreya@gmail.com**



**CS 62, 181249**