BVRIT HYDERABAD College of Enginnering for Women

Crop Prediction

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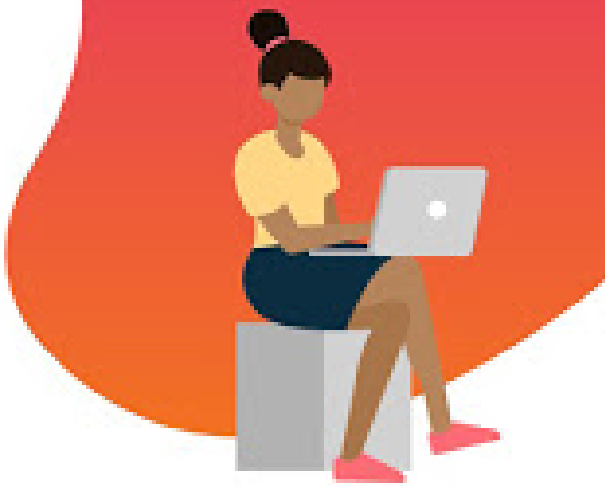
Problem Statement

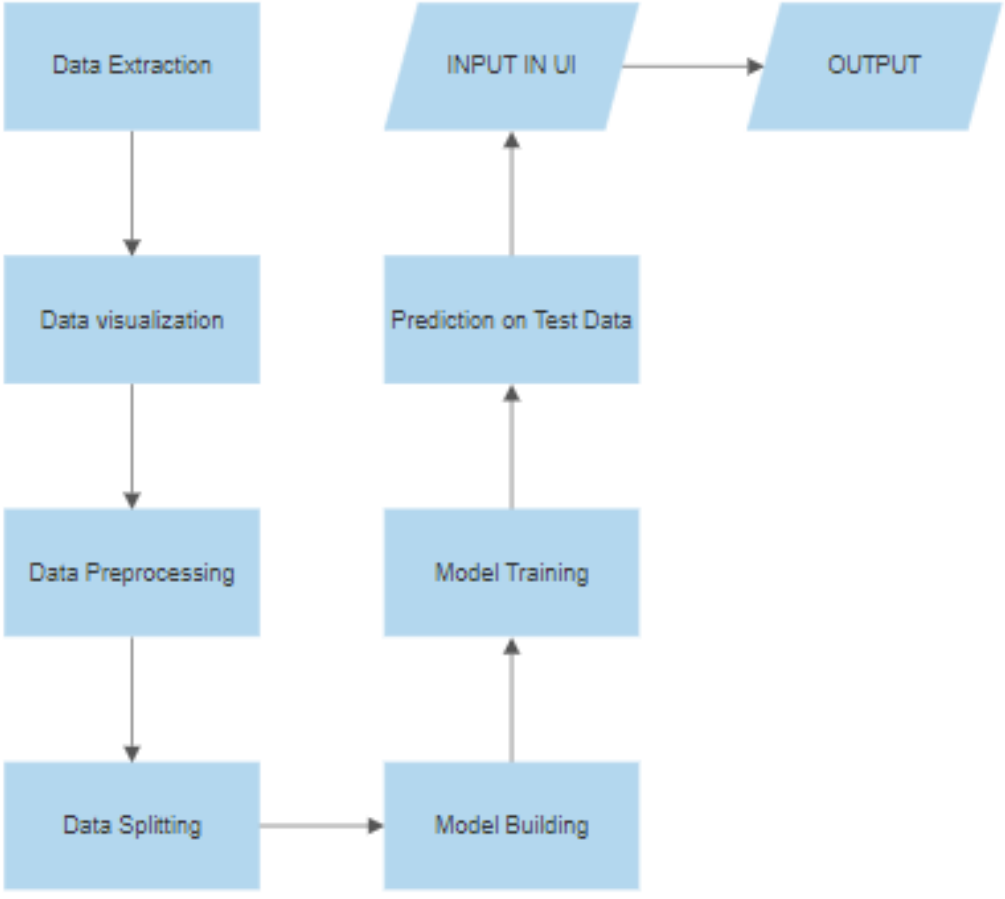
Build a Machine Learning model to predict the most suitable crop to grow on a particular farm.

Use Cases

- To help the farmer choose the right crop based on different parameters
- To avoid serious setback in productivity.



Approach


Data Extraction
Data visualization
Data Preprocessing
Data Splitting
Model Building
Model Training
Prediction on Test Data
INPUT IN UI
OUTPUT

Dataset

- **No of Crops:** 22
- **Classification:** Rice, Maize, Chickpea, Kidneybeans, Pigeonbeans, mothbeans, Mungbean, Blackgram, Lentil, pomegranate, Banana, Grapes, Mango, Watermelon, Muskmelon, Apple, Orange, Papaya, Coconut, Cotton, Jute, Coffee
- **Class variables:** 'N', 'P', 'K', 'temperature', 'humidity', 'pH', 'rainfall'

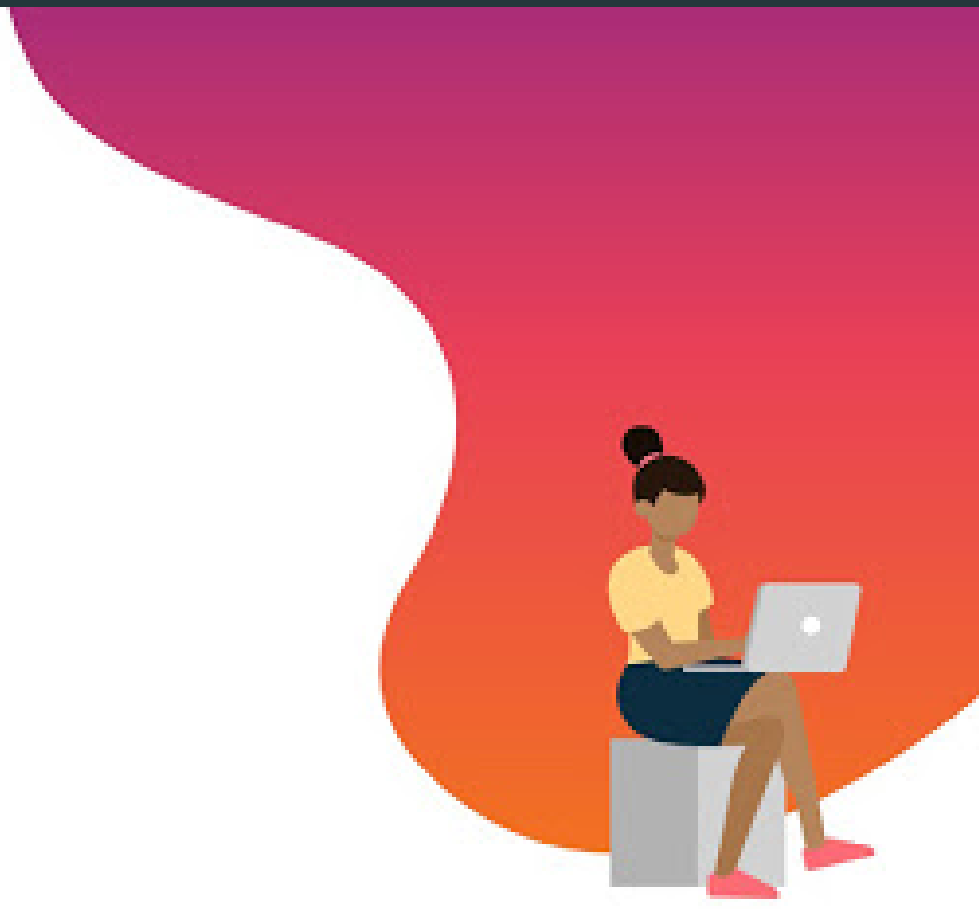
Technical Stack

Libraries:

- Pandas
- Numpy
- Seaborn
- Matplotlib
- Sklearn

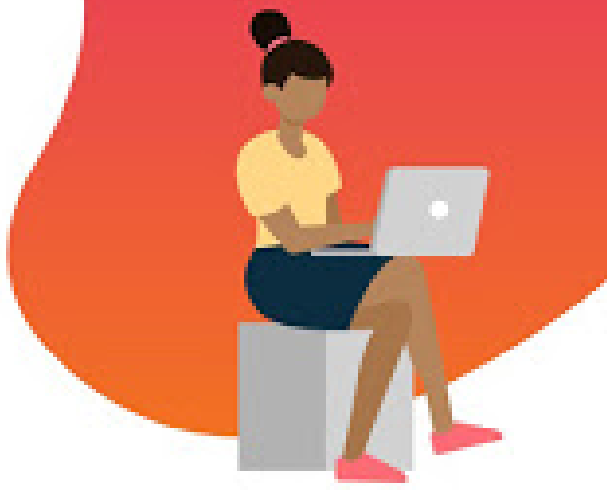
Tools:

- Google Colab
- Latex



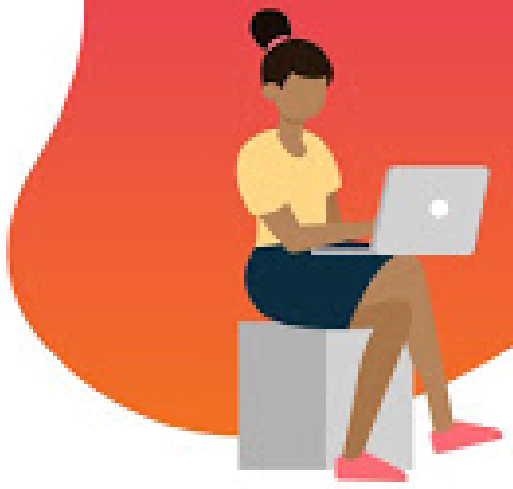
Learnings

- Understanding Classification Algorithms
- Matplotlib plots

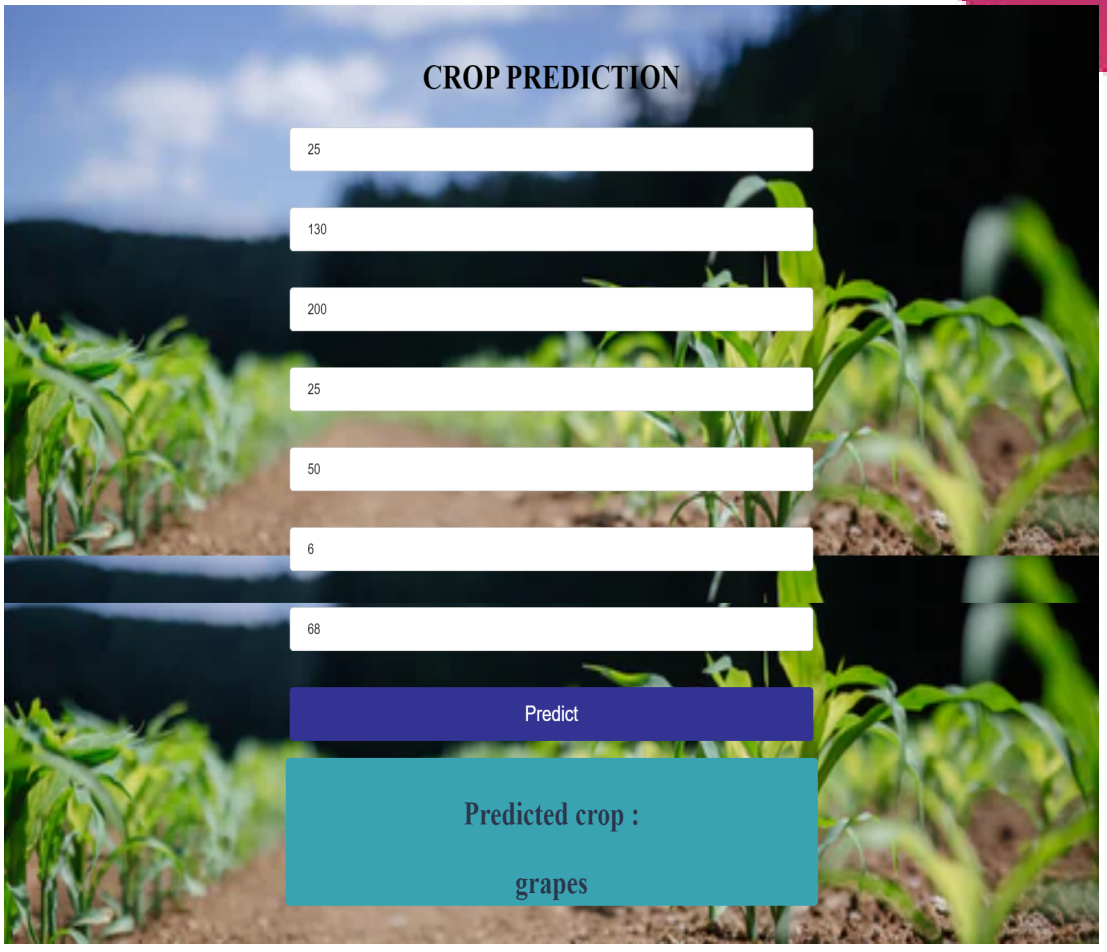


Challenges Faced

- Model Overfitting
- Understanding Documentation



Output


CROP PREDICTION
25
130
200
25
50
6
68
Predict
Predicted crop :
grapes

Collab Link

https://colab.research.google.com/drive/1zqC1Vt7tEr7QsdOvu1rpnodfKFY1k7Rb?usp=sharing

GitHub Link

https://github.com/shaliniande/Crop-Prediction

Git Commits

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GUI	Delete READ.me	36 minutes ago
LaTeX	Create READ.me	35 minutes ago

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Reference

https://dphi.tech/challenges/data-sprint-26-crop-recommendation/62/overview/about

Thank you