Model Development Phase Template

Date	15 July 2024
Team ID	739795
Project Title	Crop Prediction using machine learning
Maximum Marks	5 Marks

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
N	Nitrogen is an essential for plant growth. Ratio of Nitrogen present in the soil.	Yes	Nitrogen plays a vital role for plant growth. How much nitrogen is available to plants to predict crop performance. By using N we can plot the bar graph in our project.
P	Phosphorus is a critical component of soil fertility. Ratio of P present in the soil.	Yes	Phosphorus is one of the major nutrients in the soil. It is essential for cell division and development of growing tip of the plant. By using P we can plot the bar graph in our project.

K	It ensures proper maturation in plant by improving root strength, disease.	Yes	Potassium enhances a plants ability to withstand stress conditions such as drought disease. P improves the quality and yield of crops. By using K we can plot the bar plot in our project**.**
Temperature	Most of the plants can't efficiently grow in the cool weather. We can use to maintain the temperature levels	Yes	Different crops have specific temperature ranges for optimal growth. Different crop varieties have varying temperature tolerances. We selected temperature as a feature in our project based on the temperature we can predict the crop production. By using Temperature we can plot the box plot.
Humidity	Humidity is used to determine the likelihood of rain, fog occuring.	Yes	It influences the water balance and photosynthesis process in the plants. We can selected humidity as a feature in our project and we can plot the box plot
Rainfall	To grow the plants	Yes	Rainfall is critical for achieving optimal crop yields. Insufficient rainfall can cause droughts and excessive rainfall can lead to plant damage. We selected the rainfall as a feature and we can plot the bar plot.
Ph	To determine the suitable crop for the land.	Yes	Ph plays a important role. Farmers can test the soli to decide which crop is used to cultivate in the land. By using ph we plotted the bar plot and dist plot.