Model Development Phase Template

Date	23 September 2024
Team ID	LTVIP2024TMID24992
Project Title	Rainfall 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
Date	The date of the recorded observation.	No	Lower correlation with target column.
Location	The geographic location of the observation.	No	Explanation of why it was selected or excluded
MinTemp	The minimum temperature recorded for the day	Yes	Influences daily weather predictions.
MaxTemp	The maximum temperature recorded for the day	**No**	Lower correlation with target column.

Rainfall	The amount of rainfall recorded for the day	Yes	Direct measure of precipitation.
Evaporation	The amount of evaporation measured for the day	No	Lower correlation with target column.
Sunshine	The number of sunshine hours recorded for the day.	No	Lower correlation with target column.
WindGustDir	The direction of the strongest wind gust recorded.	Yes	Gust direction indicates storm paths.
WindGustSpeed	The speed of the strongest wind gust recorded.	Yes	Indicates potential for extreme weather.
WindDir9am	The wind direction recorded at 9 AM	No	Lower correlation with target column.
WindDir3pm	The wind direction recorded at 3 PM.	No	Lower correlation with target column.
WindSpeed9am	The wind speed recorded at 9 AM.	Yes	Morning wind patterns influence daily weather.
WindSpeed3pm	The wind speed recorded at 3 PM.	Yes	Afternoon wind patterns provide forecasting data.
Humidity9am	The humidity percentage recorded at 9 AM.	Yes	Morning humidity influences daily weather.

Humidity3pm	The humidity percentage recorded at 3 PM.	**Yes**	Directly affects precipitation predictions.
Pressure9am	The atmospheric pressure recorded at 9 AM.	**No**	Lower correlation with target column.
Pressure3pm	The atmospheric pressure recorded at 3 PM.	**No**	Lower correlation with target column.
Cloud9am	The cloud cover recorded at 9 AM.	**Yes**	Lower correlation with target column.
Cloud3pm	The cloud cover recorded at 3 PM	**Yes**	Morning cloud cover affects weather outcomes.
Temp9am	The temperature recorded at 9 AM.	**No**	Lower correlation with target column.
Temp3pm	The temperature recorded at 3 PM.	**No**	Lower correlation with target column.
RainToday	Indicates if it rained today.	**No**	High correlation but redundant with Rainfall column already providing relevant data
RainTomorrow	Predicts if it will rain tomorrow.	**Yes**	The target variable for predictive modelling – is essential for project goals.