

Rain Prediction

Overview

Rainfall prediction becomes equally important to exactly determine the rainfall for effective use of water resources, crop productivity, pre-planning of water structures, preventing floods etc.

What are the features to draw inference about rainfall? The temperature, humidity, evaporation, sunshine, windspeed, or pressure etc?

In this hackathon, you are required to predict next-day rain (**RainTomorrow**) by building classification models.

Data Dictionary

This dataset contains about 10 years of daily weather observations from many locations across Australia.

RainTomorrow is the target variable to predict. It means -- did it rain the next day, Yes or No? This column is Yes if the rain for that day was 1mm or more.

Train File

CSV contains the daily weather observations. Here, the target variable '**RainTomorrow**' is known.

Variable	Description
Date	The date of observation
Location	The common name of the location of the weather station
MinTemp	The minimum temperature in degrees celsius
MaxTemp	The maximum temperature in degrees celsius
Rainfall	The amount of rainfall recorded for the day in mm
Evaporation	The so-called Class A pan evaporation (mm) in the 24 hours to 9am
Sunshine	The number of hours of bright sunshine in the

	day
WindGustDir	The direction of the strongest wind gust in the 24 hours to midnight
WindGustSpeed	The speed (km/h) of the strongest wind gust in the 24 hours to midnight
WindDir9am	Direction of the wind at 9am
WindDir3pm	Direction of the wind at 3pm
WindSpeed9am	Wind speed (km/hr) averaged over 10 minutes prior to 9am
WindSpeed3pm	Wind speed (km/hr) averaged over 10 minutes prior to 3pm
Humidity9am	Humidity (percent) at 9am
Humidity3pm	Humidity (percent) at 3pm
Pressure9am	Atmospheric pressure (hpa) reduced to mean sea level at 9am
Pressure3pm	Atmospheric pressure (hpa) reduced to mean sea level at 3pm
Cloud9am	Fraction of sky obscured by cloud at 9am. This is measured in "oktas", which are a unit of eighths. It records how many
Cloud3pm	Fraction of sky obscured by cloud at 3pm. This is measured in "oktas", which are a unit of eighths. It records how many
Temp9am	Temperature (degrees C) at 9am
Temp3pm	Temperature (degrees C) at 3pm
RainToday	Boolean: 1 if precipitation (mm) in the 24 hours to 9am exceeds 1mm, otherwise 0
RainTomorrow	The amount of next day rain in mm. Used to create response variable RainTomorrow. A kind of measure of the "risk".

Test File

CSV containing the daily weather observations for whom **‘RainTomorrow’** is to be predicted.

Submission File Format

Variable	Description
Date	The date of observation
RainTomorrow	Predicted Rain Tomorrow value

Public and Private LeaderBoard

Test file is further divided into Public (25%) and Private (75%).

- Your initial responses will be checked and scored on the Public data.
- The final rankings would be based on your private score which will be published once the competition is over.

Evaluation Criteria

Your model performance will be evaluated on the basis of **F1-score**.

Rubrics

Component	Weightage
Data Cleaning and Data Visualization	25%
Model Building and Evaluation	60%
Pipeline and Deployment (Dashboard/Webapp)	15%

