1. **Data Collection:**
   I collect this dataset from Kaggle . The dataset link is:
   https://www.kaggle.com/datasets/petalme/seattle-weather-prediction-dataset

2. **Why I use RandomForestClassifier algorithm:**

   - Robustness to Overfitting
   - Handles non-linear data
   - Handles categorical and numerical features
   - It is appropriate for small to medium dataset

3. **RandomForestClassifier Algorithm implement methodology for this dataset:**

Step	Sub-step	Description
Problem Definition	Objective	Predict `RainTomorrow` (Binary Classification: "Yes", "No")
	Type	Binary Classification (Yes/No)
Data Preparation	Load Dataset	Read the CSV file
	Exploratory Data Analysis (EDA)	Summary statistics & Visualizations
	Data Cleaning	Handle Missing Values
	Data Transformation	Encode Target Variable & Normalize Features
	Split Dataset	80% Training, 20% Testing
Model Development	Initialize Random Forest	Specify hyperparameters (e.g., n_estimators, max_depth)
	Train Model	Fit model on the training set
Model Evaluation	Make Predictions	Predict on the testing set
	Assess Performance	Accuracy, Confusion Matrix, Precision, Recall, F1-Score, ROC-AUC
	Feature Importance	Identify important features