**1**

##### Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

**5 minutes**

**2**

**Brainstorm**

Write down any ideas that come to mind that address your problem statement.

**10 minutes**

**3**

##### Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

**20 minutes**

**4**

##### Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

**20 minutes**

# Pon Elakkiya N

**VelkanI R**

### Data Mining Ideas

Naive Bayes Classifier

Data collection & learning the trends present in it

Comparing previous prediction & datasets with ours to analyze model performance

Ensure data correctness & adequacy for prediction

Proctoring wind-speed direction wise

Observing & noting down daily temperatures

Collecting timely temperature of various regions & sub-divisions

Naive Bayes Classifier

Inspecting Atmospheric Pressure of various regions geographically distinguishable

Inspecting Atmospheric Pressure of various regions geographically distinguishable

**Problem Statement**

Agriculture is the backbone of the Indian economy. For agriculture, the most important thing is water source, i.e. rainfall.

The prediction of the amount of rainfall gives alertness to farmers by knowing early they can protect their crops from rain. So, it is important to predict the rainfall accurately as much as possible.

Exploration and analysis of data on rainfall over various regions of India and especially the regions where agricultural works have been done persistently in a wide range.

With the help of analysis and the resultant data, future rainfall prediction for those regions using various machine learning techniques such as XGBoost classifier, SVM classifiers, Decision tree, Naive bayes classifier, Logistic regression etc.

#### 

Observing Wind Direction & Cyclone formation in Arabian Sea & Bay of Bengal through Indian Metrological Dept.

Data & News

Looking into the Sky daily to observe the clouds' density

Logistic Regression to predict tomorrow’s rainfall [yes or no]

Ensure data correctness & adequacy for prediction

Comparing previous prediction & datasets with ours to analyze model performance

XGBoost Classifier

## Common Ideas Shared

Analysing & Predicting rainfall based on seasonal, monthly or annual crop yields

Random Forest Classifier

**Agricultural Intention [**Farmers usually do so]

Forecasting months to receive rainfall based on previous years' data

Looking into the Sky daily to observe the clouds' density

Analysing & Predicting rainfall based on seasonal, monthly or annual crop yields

Examining floods & encroachments to view rainfall effects

**Pattern Recognition**

Comparing previous prediction & datasets with ours to analyze model performance

**Importance**

season wise

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

Inspecting Atmospheric Pressure of various regions geographically distinguishable

Neural Network Classifiers

Observing & noting down daily temperatures

Forecasting months to receive rainfall based on previous years' data

Examining floods & encroachments to view rainfall effects

Time Series Forecasting

K-Nearest Neighbours

Linear Regression [to predict rainfall(in mm) based on features]

Collecting timely temperature of various regions & sub-divisions

Data collection & learning the trends present in it

Watching or analysing the rainfall trends

XGBoost Classifier

**Subitha R**

Watching or analysing the rainfall trends season wise

Watching or analysing the rainfall trends season wise

Collecting timely temperature of various regions & sub-divisions

Inspecting Atmospheric Pressure of various regions geographically distinguishable

Observing Wind Direction & Cyclone formation in Arabian Sea & Bay of Bengal through Indian Metrological Dept.

Data & News

Data collection & learning the trends present in it

Observing & noting down daily temperatures

Neural Network Classifiers

# Renuga Devi E

SVM

Classifier

Forecasting months to receive rainfall based on previous years' data

XGBoost Classifier

Data collection & learning the trends present in it

### ML Algorithms

Naive Bayes Classifier

### AI Approaches

Logistic Regression to predict tomorrow’s rainfall [yes or no]

Time Series Forecasting

### Deep Learning Techniques

Neural Network Classifiers

Examining floods & encroachments to view rainfall effects

Time Series Forecasting

**Feasibility**

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)

Decision Tree

K-Nearest Neighbours

Analysing & Predicting rainfall based on seasonal, monthly or annual crop yields

Random Forest Classifier



Decision Tree

Analysing the regions or districts likely to receive rainfall

Proctoring wind-speed direction wise

SVM

Linear Regression [to predict rainfall(in mm) based on features]

Classifier