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

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.

Brainstorm

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

10 minutes

Sweatha

- 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
- Looking into the Sky daily to observe the clouds' density
- Ensure data correctness & adequacy for prediction

Vigashini

- Collecting timely temperature of various regions & sub-divisions
- Naive Bayes Classifier
- Logistic Regression to predict tomorrow's rainfall [yes or no]
- Comparing previous prediction & datasets with ours to analyze model performance
- XGBoost Classifier

Common Ideas Shared

- Random Forest Classifier
- Analysing & Predicting rainfall based on seasonal, monthly or annual crop yields
- Linear Regression [to predict rainfall(in mm) based on features]
- Examining floods & encroachments to view rainfall effects
- K-Nearest Neighbours
- Time Series Forecasting

Baby Shalini

- Observing & noting down daily temperatures
- Watching or analysing the rainfall trends season wise
- Neural Network Classifiers
- Proctoring wind-speed direction wise
- Analysing the regions or districts likely to receive rainfall

Haelen Mary

- SVM Classifier
- Data collection & learning the trends present in it
- Forecasting months to receive rainfall based on previous years' data
- Decision Tree

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

Data Mining Ideas

- Observing & noting down daily temperatures
- Proctoring wind-speed direction wise
- Data collection & learning the trends present in it
- Ensure data correctness & adequacy for prediction
- Comparing previous prediction & datasets with ours to analyze model performance

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

- Data collection & learning the trends present in it
- Observing Wind Direction & Cyclone formation in Arabian Sea & Bay of Bengal through Indian Metrological Dept. Data & News
- Inspecting Atmospheric Pressure of various regions geographically distinguishable
- Collecting timely temperature of various regions & sub-divisions
- Watching or analysing the rainfall trends season wise

AI Approaches

ML Algorithms
- XGBoost Classifier
- Naive Bayes Classifier
- Logistic Regression to predict tomorrow's rainfall [yes or no]
- K-Nearest Neighbours
- Decision Tree
- Time Series Forecasting
- Random Forest Classifier
- SVM Classifier
- Linear Regression [to predict rainfall(in mm) based on features]

Deep Learning Techniques
- Neural Network Classifiers

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

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

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

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