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Machine Learning Approach For Predicting The Rainfall

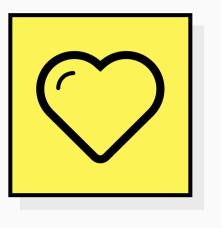
Originally created by Dave Gray at





### Machine Learning Approach For Predicting The Rainfall

Rainfall has been a major concern these days. Weather conditions have been changing for time being. Rainfall forecasting is important otherwise, it may lead to many disasters. Irregular heavy rainfall may lead to the destruction of crops, heavy floods that can cause harm to human life. It is important to exactly determine the rainfall for effective use of water resources, crop productivity, and pre-planning of water structures.



What do they HEAR?

What are they hearing others say?

What are they hearing from friends?

What are they hearing second-hand?

Farmers: Rumors

about upcoming

weather from

neighbors or

community. Official

weather bulletins.

**Local Authorities**:

Feedback from

the public, reports

from ground staff,

expert advice.

**General Public:** 

News, word of

mouth, official

weather

forecasts.

What are they hearing from colleagues?

#### WHO are we empathizing with?

Who is the person we want to understand? What is the situation they are in? What is their role in the situation?

> Farmers: Directly affected by rainfall predictions for their crops.

**General Public:** Might want to know the forecast for personal planning.

**Local Authorities:** Need to make decisions related to flood management, dam control, etc.

#### GOAL

#### What do they need to DO?

What do they need to do differently? What job(s) do they want or need to get done? What decision(s) do they need to make? How will we know they were successful?

Mobilize

Adjust farming practices based on predicted rainfall.

General Public: Local Authorities: resources and precautionary issue public measures based or advisories based on forecasts. predictions.

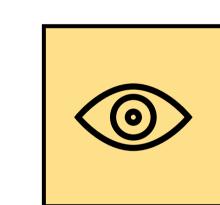
Local

#### **Authorities**: Monitoring local infrastructure, water levels, and public areas.

Farmers: Observing their own crops, local environment, and water sources.

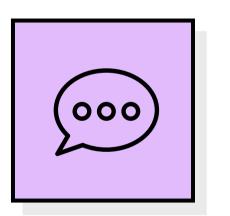
General Public: Witnessing local weather patterns, watching weather forecasts on TV or

online.



#### What do they SEE?

What do they see in the marketplace? What do they see in their immediate environment? What do they see others saying and doing? What are they watching and reading?



#### What do they SAY?

What have we heard them say? What can we magine them saying?

## Farmers:

Discuss weather with neighbors, take protective measures based on forecasts.

Issue public warnings, coordinate with teams for infrastructure

protection.

Local Authorities:

**General Public:** Share personal observations on social media, make plans based

on forecasts.

#### What do they THINK and FEEL?

#### **PAINS**

What are their fears, frustrations, and anxieties?

> Farmers: Need timely and accurate predictions to save crops and livestock.

Local **Authorities**: Need accurate data to manage public safety.

General Public: Want reliable forecasts to plan activities.

What are their wants, needs, hopes, and dreams?

Farmers: Better crop yields, reduced losses.

**GAINS** 

**Local Authorities:** Effective management of water resources, reduced flood damage.

> **General Public:** Trust in weather predictions, better personal planning.

What other thoughts and feelings might influence their behavior?

Curious about

the weather,

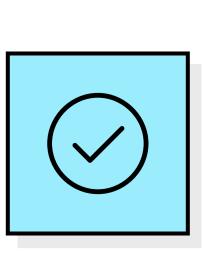
hoping for

reliability in

predictions.

Farmers: Hopeful Local Authorities: General Public: for accurate redictions to avoid crop damage. Worried about unexpected heavy rainfall or drought.

Concerned about public safety and managing water resources



#### What do they DO?

What do they do today? What behavior have we observed? What can we imagine them doing?

Farmers: Discuss weather with neighbors, take protective measures based

on forecasts.

**General Public:** Share personal observations on social media, make plans based

on forecasts.

**Local Authorities:** Issue public warnings, coordinate with teams for infrastructure protection.

#### Share template feedback