

## Ideation Phase

### Brainstorm & Idea Prioritization Template

Date	19 September 2022
Team ID	PNT2022TMID24570
Project Name	Efficient Water Quality Analysis & Prediction using Machine Learning
Maximum Marks	4 Marks

#### Brainstorm & Idea Prioritization Template:


Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

Reference:

<https://app.mural.co/t/testworkspace0020/m/testworkspace0020/1666099557706/43b82470739476a5a7499d99be46af40b4549f8e?sender=u76ef0f96203b3ae477348445>

#### Step-1: Team Gathering, Collaboration and Select the Problem Statement



### Brainstorm & idea prioritization

We as a team got together and collaborated in order to come up with some ideas and solutions for the problem statement

⌚ 10 minutes to prepare  
🕒 1 hour to collaborate  
👤 4 people involved

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**Before you collaborate**

A little bit of preparation is done from our side and we have come up with some ideas and solutions.

⌚ 10 minutes

- A** Team gathering  
We have gathered as a team in campus and we sat together to brainstorm.
- B** Set the goal  
The goal we set is to come up with some feasible solutions and ideas in order to solve the problem that we took.
- C** Learn how to use the facilitation tools  
Use the Facilitation Superpowers to run a happy and productive session.

**1**

**Define your problem statement**

We are trying to efficiently analyse the water quality and predict using Machine Learning. We have come up with some ideas and solutions

⌚ 5 minutes

**PROBLEM**

Efficient Water Quality Analysis & Prediction using Machine Learning

**Key rules of brainstorming**

To run an smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.
- Go for volume.
- If possible, be visual.

## Step-2: Brainstorm, Idea Listing and Grouping

2

### Brainstorm

We as individuals listed all the ideas that came to our mind in the sticky notes.

🕒 10 minutes

Anand S S

Need of parameters to analyse the water quality  
Should allow users to modify analysis metrics

Aravindkumar K

Need to build a web interface for visualization  
Should be able to suggest a solution for it  
Deploy the model somewhere efficiently

Manikandan P

parameter pH can also be taken into account  
We can use the pH values to find the nature of the water  
We can classify the water using classification algorithms like svm

Karthikeyan S

These analysis can be used to modify the water quality problem  
BOD can also be used as a metric to find the impurity level  
From this the specific the can be saved from detectors  
We can also make use of the BOD indicators

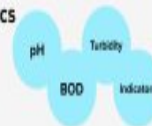
3

### Group Ideas

Here we have come up with the grouped or clustered ideas that might help in solving the problem.

🕒 20 minutes

#### Metrics



#### Solution



#### Standard Metrics

Healthy water should have the dissolved oxygen concentration above 6.5 to 8 mg/l

Drinking water has a BOD level of 1-2 PPM

Drinking water conductivity is 200 - 800

pH of tap water should be between 6.5 to 8.5

### Step-3: Idea Prioritization



#### 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

