

## **Ideation Phase**

### **Brainstorm & Idea Prioritization**

Date	09 October 2022
Team ID	PNT2022TMID24172
Project Name	Essential Water Quality Analysis and 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 number 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 are not sitting in the same room.

#### **Brainstorming steps**

- **Step-1: Team Gathering, Collaboration and Select the Problem Statement**
- **Step-2: Brainstorm, Idea Listing and Grouping**
- **Step-3: Idea Prioritization**

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

Template



### Brainstorm & idea prioritization

We as a team has involved in a brainstorming session to come with problem statements and its solution to solve.

90 minutes to prepare  
1 hour collaboration  
3 people participated

Show template feedback

#### Before collaboration

A little bit of preparation has been done for 10 minutes. Here's what we have prepared in the preparation time.

90 minutes

Team gathering

- Defined who should participate in the session
- The team meeting was set up through email
- The team members have joined the Google meet
- The invite for collaboration is sent by email

Set the goal

- A proper explanation on what, why, and how we will do brainstorming was given by the team lead
- Communicated the problem we plan to concentrate on solving throughout the brainstorming session

Learn how to use the facilitation tools

Use the Facilitation Spreadsheet to run a meeting and track a few weeks

Open article

#### Define your problem statement

The problem we are trying to solve is Water Quality Analysis. This will be the focus of our brainstorm.

90 minutes

PROBLEM

ESSENTIAL WATER QUALITY DETECTION AND PREDICTION USING MACHINE LEARNING

Key rules of brainstorming

To run an smooth and productive session, we are requested to follow below rules

Stay in topic

Encourage wild ideas







Don't judge


Listen to others

Go for volume

Don't criticize, no veto's

#### Need for Water Quality Analysis





#### Need some inspiration?

Get a focused session with creative and relevant ideas.

Quick example

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

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### Brainstorm

The ideas are listed down by sticky notes by event members

00 minutes

#### Dorika Kaku H H

<b>Water Quality analysis</b> Four major parameters	Should have some quality control like water filter, chemical treatment, conductivity	<b>Parameter: Dissolved Oxygen</b>
The quantity of dissolved oxygen is a key indicator of water quality in streams and lakes	The DO test measures the amount of oxygen dissolved in the water	Water with low DO has less ability to support aquatic organisms. Dissolved oxygen is low in water quality is high
Healthy ecosystems generally have dissolved oxygen levels above 5.0 mg/L and below 12.0 mg/L	We should develop a web application to monitor water quality	Aerobic plants in streams help in the quality analysis

#### Seduthika M

Water quality is one of the most important quality indicators in a ecosystem	<b>Parameter: Conductivity</b>	Conductivity is a good measure of water quality. It is used to detect dissolved minerals in water. It is a good indicator of water quality
Conductivity is a good indicator of water quality. It is used to detect dissolved minerals in water. It is a good indicator of water quality	Conductivity is a good indicator of water quality. It is used to detect dissolved minerals in water. It is a good indicator of water quality	The specific conductance test is used to measure the ability of water to carry an electrical current
High conductivity means that the water contains a high amount of dissolved salts	The drinking water conductivity is 200 to 800 µS/cm	We should consider all possible water quality parameters

#### Edwarde ABR

Water quality is one of the most important quality indicators in a ecosystem	<b>Parameter: pH</b>	Water quality is one of the most important quality indicators in a ecosystem
A pH test measures the acidity or alkalinity of water	A pH of 7 is neutral, below 7 is acidic and above 7 is basic or alkali	Water with a pH of 7 is neutral, below 7 is acidic and above 7 is basic or alkali
Drinking water has a pH of 6.5 to 8.5	We classify whether the water is fit or unfit for usage	We can apply classification algorithms like this one

#### Vairam V

Water quality is one of the most important quality indicators in a ecosystem	<b>Parameter: BOD</b>	BOD is a good indicator of water quality. It is used to detect dissolved organic matter in water. It is a good indicator of water quality
BOD is a good indicator of water quality. It is used to detect dissolved organic matter in water. It is a good indicator of water quality	BOD is a good indicator of water quality. It is used to detect dissolved organic matter in water. It is a good indicator of water quality	If the BOD level is high, the water is contaminated
Drinking water has a BOD level of 0.5 to 1.0 mg/L	Drinking water has a BOD level of 0.5 to 1.0 mg/L	Only when water quality parameters are considered we get maximum accuracy

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### Group ideas

Clustered group of ideas based on similarity

00 minutes

#### KEY INDICATORS



#### SOLUTION



#### STANDARD LEVELS



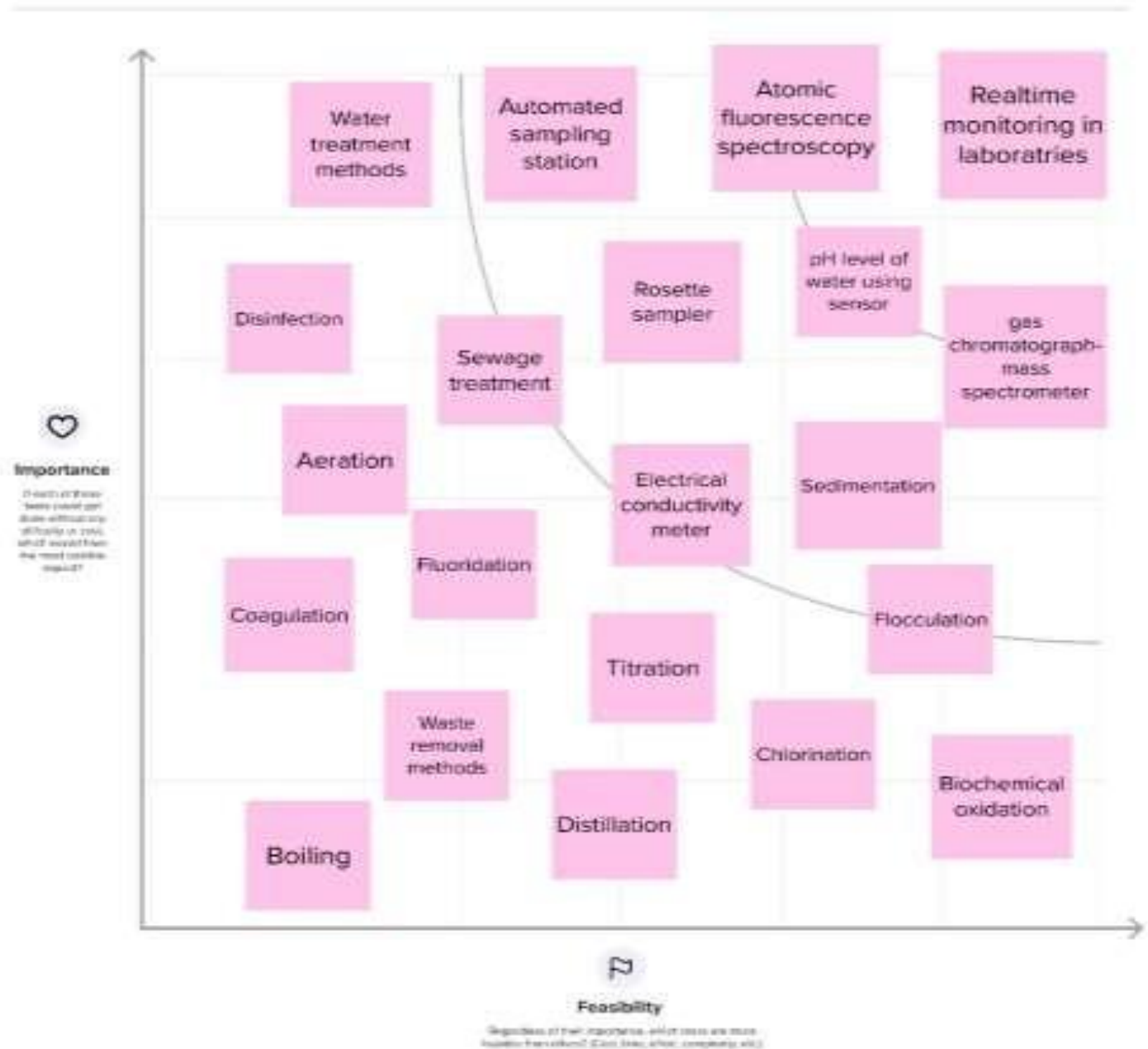
### Step-3: Idea Prioritization

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#### Prioritize

We have prioritized the ideas based on importance

20 minutes



# OVERALL BRAINSTORMING AND IDEA PRIORITIZATION

