

Ideation Phase

Brainstorm & Idea Prioritization Template

Date	13 October 2022
Team ID	PNT2022TMID45606
Project Name	Efficient water quality analysis and prediction using machine learning.
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

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

Template

EFFICIENT WATER QUALITY ANALYSIS AND PREDICTION USING MACHINE LEARNING

Water is the most important of sources, vital for sustaining all kinds of life. Water covers about 71% of the Earth's surface, mostly in the form of ponds, lakes, rivers, seas, oceans and finally get saved as ground water. There are various sources such as urbanization, deforestation, industrial effluents, usage of fertilizers, insecticides, pesticides, etc. which results in the contamination or degradation of the quality of water. So, it is necessary to determine the quality of water samples so as to determine and detect the contaminants present in those water samples.

40 minutes to prepare

1 hour to collaborate

2-8 people recommended

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

- ☐ **Team gathering**
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.
- ☐ **Set the goal**
Think about the problem you'll be focusing on solving in the brainstorming session.
- ☐ **Learn how to use the facilitation tools**
Use the Facilitation Superpowers to run a happy and productive session.

Open article

Define your problem statement

Water is perhaps the most precious natural resource after air. Though the surface of earth is mostly consists of water, only a small part of it is usable, which makes this resource very limited. Safe and readily available waters important for public health, whether it is used for drinking, domestic use, food production or recreational purposes. It is known that contaminated water and inadequate sanitation facilitate the transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis, etc. Hence it is really important to predict the level of water quality and take preventive measures.

5 minutes

PROBLEM

To predict the water quality using ML algorithms.
To provide various purification techniques based on the analysis of water quality.

Key rules of brainstorming

To run a 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

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

10 minutes

MOHAMED
FAISAL A S

System should operate in all kinds of water.

Useful to people with no prior knowledge.

ROSHAN J

System should analyse different volumes and no. of samples effectively.

Should sustain changes.

SABARIVASAN
V P

System should be compatible with future technologies.

Easy interpretation of results.

System should detect the essential minerals.

Easy access to predicted information.

CHINNAYA
BHARATHI C K

Recommend the purification techniques based on impurities present.

It should be trustworthy.

Classify the water based on parameters involved.

Provides results in a flawless way.

Takes less time for prediction.

Predict the Potability of samples.

Create User Friendly GUI.

Detects the contaminants in water.

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 can break it up into smaller sub-groups.

20 minutes

Category 1

System should operate in all kinds of water.

Recommend the purification techniques based on impurities present.

Predict the Potability of samples.

Detects the contaminants in water.

Category 2

System should be compatible with future technologies.

System should detect the essential minerals.

Takes less time for prediction.

Should sustain changes.

Category 3

It should be trustworthy.

Easy access to predicted information.

Provides results in a flawless way.

Useful to people with no prior knowledge.

Step-3: Idea Prioritization

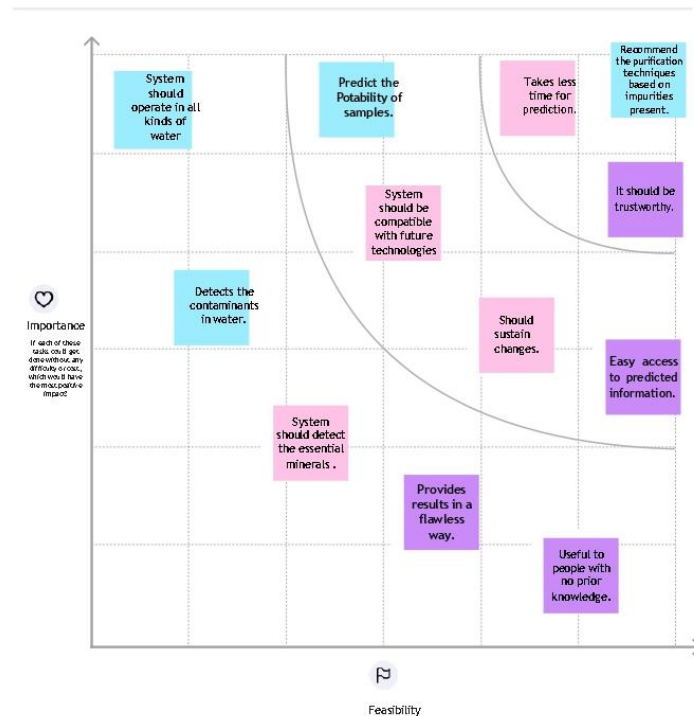
4

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

10 minutes



5

After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

10 minutes

Quick add-ons

- ☐ A Share the mural
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.
- ☐ B Export the mural
Export a copy of the mural as a PNG or PDF to attach to email, include in slides, or save in your drive.

Keep moving forward

- Strategy blueprint**
Define the components of a new idea or strategy.
[Open the template](#)
- Customer experience journey map**
Understand customer needs, motivations, and obstacles for an experience.
[Open the template](#)
- Strengths, weaknesses, opportunities & threats**
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
[Open the template](#)

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