Ideation Phase
Brainstorm & Idea Prioritization Template

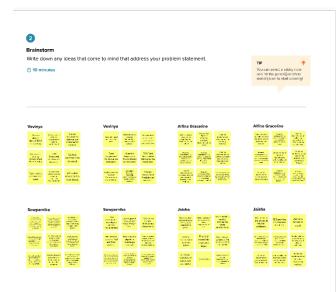| Date	19 September 2022
Team ID	PNT2022TMID18285
Project Name	Efficient Water Quality Analysis & Prediction using Machine Learning
Maximum Marks	4 Marks

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.

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

Step-2: Brainstorm, Idea Listing and Grouping

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Brainstorm

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

🕐 10 minutes

Vevinya

Vevinya

Alfina Graceline

Alfina Graceline

Sowparnika

Sowparnika

Jaisha

Jaisha

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go.
In the last 10 minutes, 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.
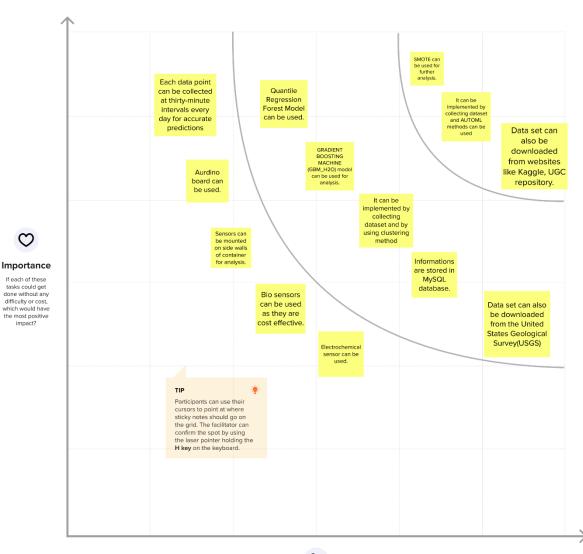
🕐 20 minutes

Step-3: Idea Prioritization

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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?

- Each data point can be collected at thirty-minute intervals every day for accurate predictions
- Quantile Regression Forest Model can be used.
- SMOTE can be used for further analysis.
- It can be implemented by collecting dataset and AUTOML methods can be used
- Data set can also be downloaded from websites like Kaggle, UGC repository.
- Aurdino board can be used.
- GRADIENT BOOSTING MACHINE (GBM_H2O) model can be used for analysis.
- It can be implemented by collecting dataset and by using clustering method
- Sensors can be mounted on side walls of container for analysis.
- Informations are stored in MySQL database.
- Bio sensors can be used as they are cost effective
- Data set can also be downloaded from the United States Geological Survey(USGS)
- Electrochemical sensor can be used.

TIP 💡

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.

Feasibility

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