Problem-Solution fit canvas 2.0

EFFICIENT WATER QUALITY ANALYSIS AND PREDICTION USING MACHINE LEARNING

1. CUSTOMER SEGMENT(S) **CS**

The person who wishes to know the quality of the water he uses.
Someone who wants to identify the water quality based on the water quality index(WQI) and know it's usage purpose.

6. CUSTOMER CONSTRAINTS **CC**

The customer thinks that water sample is required to identify it's purpose of usage. Identifying the water quality in laboratories may not be cost efficient which the common people could afford.

5. AVAILABLE SOLUTIONS **AS**

The water can be tested for purity in labs which may be time consuming and required lot of manual work.
Water sample is required to check it's quality.
Few applications are available which helps the customer to calculate the water quality index.

2. JOBS-TO-BE-DONE / PROBLEMS **&**

Calculating water quality index based on the user given parameters like pH, Conductivity, temperature, nitrate, and total coliform.
Using the calculated WQI the purpose for which the water can be used is suggested to the user.

9. PROBLEM ROOT CAUSE

Water is a vital source for the existence of living organisms.
Good quality water nourishes human health thereby ensuring safety from water borne diseases.
Trying to know the quality of water used meets the standard suggested by World Health Organization is crucial.
Therefore an application which calculates WQI and suggests the ways in which the water can be used assures the customer.

7. BEHAVIOUR

The customer searches for free web application which measures the water quality index and suggests ways in which the water can be used.
The customer also want the process to be time and cost efficient.

3. TRIGGERS

The curiosity to know the quality of the water which is used in the day to day life of the individual forces him to analyze it's quality.

The customer is assured to know that the water he uses meets the water quality index standard.

10. YOUR SOLUTION **SL**

Developing a web application and integrating it with a model built using machine learning algorithms based on dataset already available help to assist the user to know the purpose for which the water can be used.

8. CHANNELS of BEHAVIOUR **CH**

8.1 ONLINE
The customer make use of free applications available online to measure water quality.

8.2 OFFLINE
The customer try to analyse the water sample in their local laboratories.

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