Basic Details of the Team and Problem Statement

SMART INDIA HACKATHON 2023
SIH

Ministry: Ministry of Environment

PS Code: SIH1393

Problem Statement Title: Water and Electricity Tracking App

Team Name: Reservoir Dogs

Team Leader Name: Seelam Alexander

Institute Code (AISHE): U-0053

Institute Name: IIT Guwahati

Theme Name: Smart Automation

Idea/Approach Details

Idea/Solution/Prototype:

❖ Designing a comprehensive platform (App)for users to control and optimize their energy and water consumption targets.

❖ Utilizing machine learning algorithms, we'll be offering personalized efficiency suggestions based on historical data.

❖ Integrates data from power companies and water bills using APIs to provide precise and up-to-date recommendations.

❖ Accessible on various devices, including web and mobile, ensuring users can manage their consumption from anywhere.

❖ As a business potential, we can build a device equipped with Wi-Fi connectivity, voltage and current sensors, and Arduino technology to monitor real-time home electricity and water usage better than API calls.

Add process flow chart or simulated image of prototype or any relevant image related to your idea

Technology stack:

➢ Machine Learning, NLP models and Decision trees.

➢ Flutter for Application development with API integrations.

➢ Data from MyGov to train ML models.

➢ Data Scrapping(Python libraries).

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Idea/Approach Details

Use Cases:

- ✓ This application is useful for all the places for saving electricity like homes, offices, and factories.
- ✓ Daily usage of power and water changes from season to season. It may be a hot summer day which requires more consumption of water and power. For winter it is low as compared to summer
- ✓ Consumption also changes from family to family it depends on no of adults and children in house and no of applications in house.
- ✓ It is a long-term business idea for personalized recommendation as per user history we have recommendations to save electricity/water

Dependencies:

- o The user has to give access to the location because Electricity/water use depends on temperature.

- o Starting 10 days application will follow the history and observe the user.

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Team Member Details

Team Leader Name: Seelam ALexander

Branch (Btech/Mtech/PhD etc): BTECH Stream (ECE, CSE etc): ECE Year (I,II,III,IV):III

Team Member 1 Name: Kalavakuri Vamsi

Branch (Btech/Mtech/PhD etc): BTECH Stream (ECE, CSE etc): MECHANICAL Year (I,II,III,IV):III

Team Member 2 Name: Munagala Devi Naga Sai Srinivas

Branch (Btech/Mtech/PhD etc): BTECH Stream (ECE, CSE etc): CSE Year (I,II,III,IV):III

Team Member 3 Name: Majji Aditya

Branch (Btech/Mtech/PhD etc): BTECH Stream (ECE, CSE etc): CSE Year (I,II,III,IV):III

Team Member 4 Name: Peruri Bhavana

Branch (Btech/Mtech/PhD etc): BTECH Stream (ECE, CSE etc): CIVIL Year (I,II,III,IV):III

Team Member 5 Name: Shifali Agrahari

Branch (Btech/Mtech/PhD etc): MTECH+PHD Stream (ECE, CSE etc): CSE Year (I,II,III,IV):II