Build your City

2023

Problem Statement and Themes HACK-O-SMART

Themes

1. **Heritage & Culture** – Ideas that showcase the rich cultural heritage and traditions of India.
2. **Clean & Green Technology** – Solutions could be in the form of waste segregation, disposal, and improved sanitation systems.
3. **Smart Education** – Smart education, a concept that describes learning in the digital age. It enables learners to learn more effectively, efficiently, flexibly, and comfortably.
4. **Agriculture, FoodTech & Rural Development** – Developing solutions, keeping in mind the need to enhance the primary sector of India – Agriculture and to manage and process our agricultural produce.

Problem Statements

1. Problem Statement Number: HOSTSCL01

1.1. Problem Statement

Development of the AI/AR/VR/Metaverse based Application (Web/Android) for Tumakuru Tourism

1.2. Challenge Description with Context

Tumakuru city and district limits have diverse and various tourist spots which increases the cultural aspect of the city. The application should outstate the cultural, heritage and living background of the city.

1.3. What Exact Problem is being Solved?

A centralized application serving as a knowledge center of the district. Lack of knowledge on the Tumakuru district, tourist places and city can be solved using this solution. An AR based application will enhance the interest among the citizens and project the city's heritage by helping in economic development.

1.4. Key factors for Solution.

The product should be an end-to-end solution.
Highlights the transportation, Accommodation, Nearby places (if any), Entry Fees (if any-digitized platform for ticket booking),

1.5. Users

General Public, Tourists, Visitors, Citizen

2. Problem Statement Number: HOSTSCL02

2.1. Problem Statement

An effective Solid Waste Management System and application to manage the end-end services of SWM vehicles in Tumakuru city.

2.2. Available System and Assumption

GPS Tracking of all the SWM Vehicles and a centralized dashboard for monitoring the same is available with Tumakuru Smart City. The presumption may be considered as the same.

2.3. Challenge Description with Context

The application should be developed having a grievance system inbuilt with the SWM monitoring system. The application should have the capability to adapt to various SoP's which can be configured time to time.

2.4. What Exact Problem is being Solved?

The application sets out a platform for centralized grievance redressal for SWM. This is mostly faced in most of the wards of Tumakuru. The SWM vehicles un-availability, untimely visits etc. The grievance should be monitored with the respective SoP's implemented in the system.

2.5. Users

General Public, Citizen, Tumakuru City Corporation, Pourakarmikas, Officers, Government Officers

3. Problem Statement Number: HOSTSCL03

3.1. Problem Statement

A centralized education platform monitored at a district level having access to seat availability, fee details etc.

3.2. Available System and Assumption

No Assumption

3.3. Challenge Description with Context

The system should allow a user to understand and get all the information related to Tumakuru Educational Institutions. The application should also show the information like achievements of the schools, Seat Availability, admission details, results etc. This application is a centralized platform for all education services including Government, Aided, Non-Aided and Private Institutions. The objective is to provide a single dashboard to citizens for easy and quick reference. Usage of AR/VR is encouraged to show the school statistics.

3.4. What Exact Problem is being Solved?

Lack of a centralized platform to know the education institutions in Tumakuru city and district limits. Information dissemination and an interactive platform where the citizen can directly interact with the institutes for better understanding and ease of service.

3.5. Users

General Public, Citizen, Government Schools and Colleges, Private Schools and Colleges, University

4. Problem Statement Number: HOSTSCL04

4.1. Problem Statement

Cleanliness Automation using Deep Learning

4.2. Problem Description

A complete automation of garbage collection system which includes identification of garbage from CCTV camera footage. This is the critical task where knowledge of image processing and machine learning will be applied. Participants are expected to have a database of images of garbage to train their model.

4.3. Available System and Assumption

CCTV has been employed at every street.

4.4. What Exact Problem is being Solved?

The garbage thrown on the streets gets uncollected for many days which is the source of many problems and leads to many health-related issues. An algorithm that can detect the garbage and determine the location of the same and notify the respective authorities. Authorities are expected to take immediate actions.

4.5. Users

Tumakuru City Corporation Officials, Tumakuru Smart City Officials, and Command Center officials.

5. Problem Statement Number: HOSTSCL05

5.1. Problem Statement

A Centralized Transportation Platform for various city transport services like taxis, auto, city buses etc.

5.2. Problem Description

Tumakuru does not have a standard platform which is a centralized place for availing various transportation services. This platform will help citizens to get any kind of transportation services managed centrally at Tumakuru Command Center. This application will be in two versions- Android /IoS and Web.

5.3. Available System and Assumption

Rydo is an Auto Request App available in Tumakuru and No assumption applicable to this problem statement.

5.4. What Exact Problem is being Solved?

The citizen should wander and struggle to get the transportation services information at various places and it is decentralized. A new visitor to the city must face a lot of problems understanding the transportation services in the city. When a new visitor enters the city, a new message may be triggered through the telecom collaboration to notify on this transportation services platform. This platform will give confidence and a more structured system in the city.

5.5. Users

Citizen, Visitors, Tourists, Residents.