

RAJASTHAN IT HACKATHON

SMART SEVAK

**Theme :**

Smart City

Problem :

An application with features that provides citizens with a powerful tool for identifying and solving the problems in their community, while also improving the data gaps and enhancing the living experience for everyone.

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Smart Sevak

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INTRODUCTION

1.1 Overview

- **Want to know what makes a city smart?**
- **Want to increase transparency & access to information between the Government and citizens?**
- **Want to improve your Quality of Life?**
- **Want to optimize your time through strategic planning for social services?**
- **Want to give suggestions for infrastructure improvements?**
- **Want to make your own smart community?**
- **Can smart cities deliver a cleaner and more sustainable environment?**

Smart cities put data and digital technology to work to make better decisions and improve the quality of life. More comprehensive, real-time data gives agencies the ability to watch events as they unfold, understand how demand patterns are changing, and respond with faster and lower-cost solutions. Three layers work together to make a smart city.

First is the technology base, which includes a critical mass of smartphones and sensors connected by high-speed communication networks. The second layer consists of specific applications. Translating raw data into alerts, insight, and action requires the right tools, and this is where technology providers and app developers come in. The third layer is usage by cities, companies, and the public.

Many applications succeed only if they are widely adopted and manage to change behavior. They encourage people to use transit during off-hours, to change routes, to use less energy and water and to do so at different times of day, and to reduce strains on the healthcare system through preventive self-care.

Smart cities add digital intelligence to the urban world to solve public problems and achieve a higher quality of life. A city homes people from all classes, and being a smart city means catering to the people of every tier, the analysis of which is data intensive.

Smart-city technologies have substantial unrealized potential to improve the urban quality of life. A look at current deployment in 50 cities around the world shows that even the most advanced still have a long way to go. Smart cities change the economics of infrastructure and create room for partnerships and private-sector participation.

All of these require curated data for the ML models to predict outcomes that aim at better. After a decade of trial and error, municipal leaders are realizing that smart-city strategies start with people, not technology. “Smartness” is not just about installing digital interfaces in traditional infrastructure or streamlining city operations. It is also about using technology and data purposefully to make better decisions and deliver a better quality of life.

If you want to create a platform for a community to suggest infrastructure improvements to the government for a particular place, you could consider creating a "crowdsourced infrastructure

improvement initiative" or a "community-driven infrastructure improvement campaign." Here are some steps you could take:

An application that aims at integrating solutions to the collective problem of citizens, helps tighten the cultural fabric of our society

- Identify the specific place or location that needs infrastructure improvements. It could be a park, a street, a school, a public building, or any other public space.
- Create a platform for community members to share their ideas and suggestions. This could be a website, a social media group, an online survey, or a community meeting.
- Encourage community members to share their experiences and perspectives on the current infrastructure and how it can be improved. This could involve sharing photos, videos, or written descriptions of the issues they have faced.
- Compile the suggestions and feedback from the community and prioritize the most feasible and impactful improvements.
- Develop a proposal or plan to present to the government, including cost estimates, timelines, and potential funding sources.
- Engage with government officials and policymakers to advocate for the proposed improvements and work collaboratively to implement them.

By creating a platform for community members to share their ideas and suggestions, you can help ensure that the infrastructure improvements are responsive to the needs and priorities of the people who will be using the platform.

Sure, here is a brief description of the features that an app aiming to provide solutions to citizen problems and bridge data gaps could have:

Overall, an app with these features would provide citizens with a powerful tool for identifying and solving problems in their community, while also bridging data gaps and improving the living experience for everyone.

Introduction

The Citizen Solutions app is a mobile application designed to provide solutions to citizen problems and bridge data gaps in the community. This app is specially designed to ease the public ticketing system by incorporating a unique QR Generator to romp through ticketing, with a fun twist to it. The app allows citizens to report any problems they encounter, such as infrastructure issues, safety concerns, or public

service complaints. It also collects data on the reported problems, including location, severity, and type, and uses machine learning algorithms to analyze the data and identify patterns and trends, including black point detections.

Features

1. **QR Scanner:** To ease the manual ticketing system and save you from lengthy long queues, SmartSevak generates a unique QR code for you, that can be scanned at any public place and provides you with a digital ticket without encashing your time. Which makes it an even more convenient and sustainable option to choose from.
2. **Gamification:** This app also has a fun element to it. It lets you experience the childhood adrenaline rush by earning CityPoints on every Smart action like posting, reporting, and scanning. These CityPoints can later be redeemed as money to pay for your tickets.
3. **Problem Reporting:** The app allows citizens to report any problems they encounter by filling out a form that includes information about the problem's location, severity, and type. They can also attach photos or videos to provide additional information.
4. **Data Collection:** The app collects data on the reported problems, including the date and time the problem was reported, the demographics of the person reporting the problem, and the status of the problem. This data is used to identify patterns and trends and to provide targeted solutions to existing problems.
5. **Machine Learning Algorithms:** The app uses machine learning algorithms to analyze the data and identify patterns and trends. This enables the app to predict potential issues before they arise and provide targeted solutions to existing problems. For example, the app can combine data from reported accidents with data available to the government to detect black spots through predictive modeling in ML.
6. **Government Integration:** The app integrates with government databases to access data that is currently unreported. This helps bridge the gap between the data the government has and the data that is missing.
7. **Community Engagement:** The app provides a platform for discussions and collaboration on how to solve problems. It also offers feedback mechanisms to track progress and encourage accountability.
8. **Personalized Recommendations:** The app provides personalized recommendations to citizens based on their location, interests, and past activities. This helps citizens make informed decisions on how to improve their living experience.
9. **Government Advertising:** The app allows government agencies to reach a wider audience with their public service announcements, reducing the need for expensive advertising campaigns. With 68% of Indian users relying on smartphones as their primary source of news, the app provides an effective way for government agencies to disseminate information and increase awareness.
10. **Citizen Awareness:** The app addresses the issue of unawareness among citizens by providing timely and relevant information about the problems and issues affecting their community. This helps citizens stay informed and take an active role in solving problems.
11. **Transportation:** The app provides information on local transportation options, including public transit schedules and real-time traffic updates.
12. **Local Events:** The app features a calendar of local events and activities, helping citizens stay informed about what's happening in their community.
13. **Public Facilities:** The app provides a one-card solution for all publicly access facilities, making it easy for citizens to access and use public services.

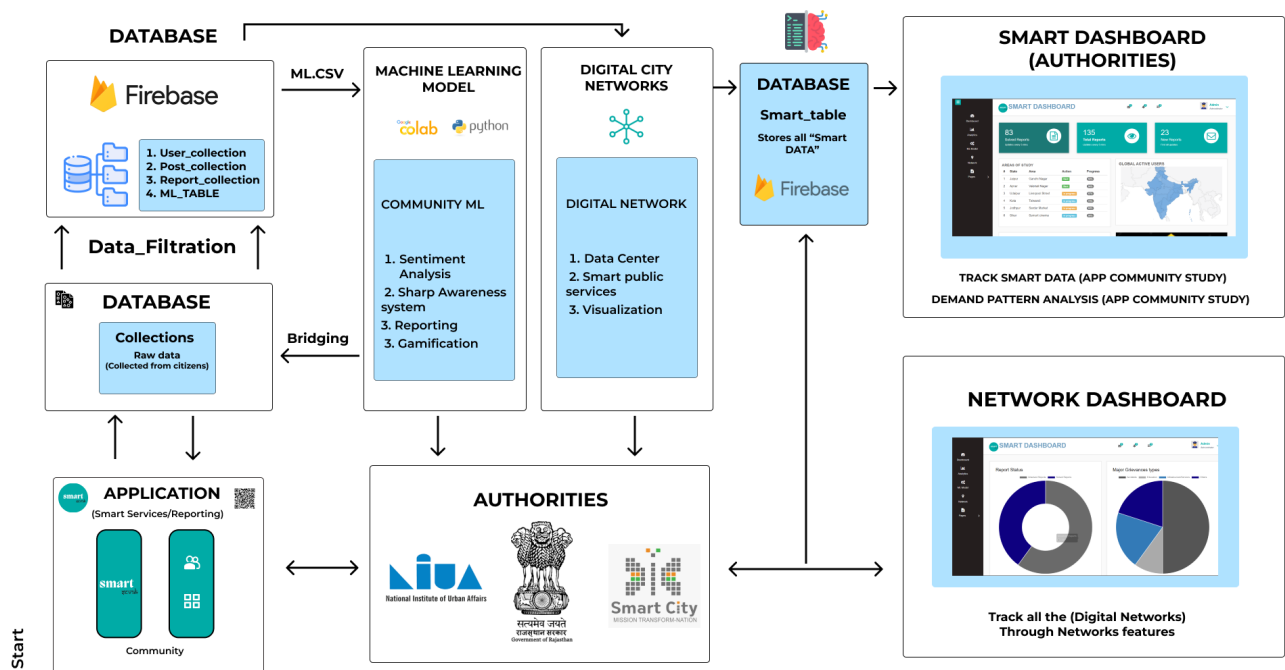
14. Grievances/Improvements: The app includes an augmented reality feature that allows citizens to report grievances and suggest improvements to public spaces, infrastructure, and facilities.
15. Recommendations Verified by Locals: The app provides recommendations for local businesses and services, verified by locals in the community.
16. Community Integration: The app features a social network-like interface that allows citizens to connect and collaborate with each other on community issues.
17. Intelligent Suggestions: The app uses machine learning algorithms to provide intelligent suggestions for problem-solving based on user data.
18. Tourist-Friendly: The app features tourist-friendly information, such as local attractions, maps, and recommended activities

3 THEORETICAL ANALYSIS

3.1 FlowChart

Diagram showing the control flow of the solution

Diagrammatic overview of the project.



3.2 Hardware / Software Designing

Hardware and software requirements of the project

Software requirement specification:

The minimum software requirement specifications for developing this software are as follows:

- Operating System
- Presentation layer
- Database
- Presentation
- Documentation Tool

Hardware requirement specification:

- Processor
- RAM
- Hard Disk
- Monitor

Technologies & tools:

Android App:

- Android Studio
- Kotlin
- XML

Front-End, UI/UX

- Figma.
- Canva.
- Flask.
- HTML, CSS, Javascript, python.

Back - End

- Firestore.
- Firebase.
- Fire authentication.

For Data Science

- Excel
- Google Maps
- Php, MySql

For Machine learning

- Python
- Google collab

Conclusion

The Citizen Solutions app is a powerful tool for identifying and solving problems in the community as well as ease of access through quick ticketing, while also bridging data gaps and improving the living experience for everyone. By providing a platform for citizen engagement and collaboration, the app empowers citizens to take an active role in shaping their community's future. With the added features of government advertising and citizen awareness, the app helps reduce government spending on expensive advertising campaigns and addresses the issue of unawareness among citizens. With the app's machine learning algorithms, the government can also detect black spots on roads and prevent accidents, making the app a valuable resource for both citizens and government agencies. This app is a warehouse of solutions/preventive measures to all the problems the citizens and the government can encounter.

THANK YOU.