


Voice-based Citizen Grievances Redressal System

Facility for citizens to report complaints without any hassle!


What Problem Are We Trying to Solve?

We, the citizens, often come across frequent domestic issues, whether petty or serious ones. It could be about the street lights not working in your road, or about the reckless neighbourhood music parties every midnight, or about irregular drinking water supply, or about the increase in stray dog population, or about robberies in your neighbourhood, etc.


Such problems need to be addressed whether small or big. Citizens often find it confusing and troublesome as to where and to whom to complain about these issues. Most of the times, they just get used to these problems and never try to report it.



What Is Our Solution?

- A mobile application, which can voice-record individual citizen grievances, collect useful details about the whereabouts and context of the complaint and keep the citizens posted on the status and continuous developments taken by the officials/department towards solving the problems, ensures the users are satisfied and optimistic that their grievance was heard and is been acted upon
 - Direct the grievances received, to the respective department/authorities depending upon the type/context of the complaint in the fastest possible way giving a chance for both the citizens and the officials to have a much-necessary continuous communication between them, which is sadly lacking in present society
 - Enable the officials to keep posting updates on the solution and close the problems once the citizen is happy with the solution provided
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The App Features


- Option to register users with their Aadhar number, provides a one-step verification to ensure the user is a registered and authenticated citizen
 - Users can either fill(type) out a form explaining their complaint, or simply start recording their complaint by a click of a button
 - The complaint gets updated in the central database(which is hosted on Cloud Platform) and is then visible to all registered users and the authorities/officials too
 - In case multiple users have the same issue in their neighbourhood, they can simply click on the already existing complaint(which is visible in the app). The counter which represents the number of people having the problem gets incremented every time different users click on it
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The App Features(Continued)

- Notifications on the recent updates on the complaint keeps getting shown up on the users' smartphones. Different stages of solution are displayed to the users, which are updated by the authorities themselves
- Once the problem has been solved, the citizen who posted the problem in the first place can check off(along with providing a small review on how they liked/disliked the solution based on speed and efficiency), which is then seen by the officials and can later either close it, or make further changes until the citizens are happy



The App Features(Continued)

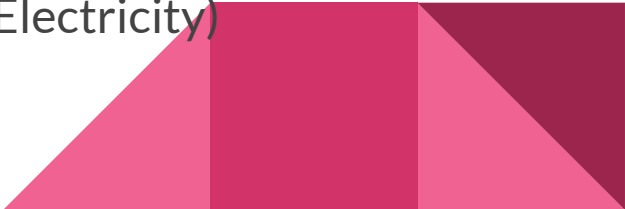
- To keep up the motivation of both the citizens and the department/authorities, a statistics dashboard is displayed in the home page which displays the number of complaints, number of solutions offered to the complaints, all “area-wise”
 - Statistics showing the frequency of complaints across different departments and % of them solved gives a fair idea as to which department is lagging and which is leading in providing a better service to the citizens
 - An online discussion forum is also provided which enables the citizens to communicate with one another, share problems and provide useful insights and solutions, encouraging healthy society relations
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Technology Used

- Google's free voice-to-text conversion service can be used to accept voice recordings(complaints) of the citizens and convert it to text to store in database
- Now, the complaint(in the form of text) is then broken down to smaller parts and categorised into respective departments using a smart and automated computer program
- The computer program is developed and designed using the concepts of a Machine Learning branch, called the Natural Language Processing(NLP)



Technology Used

- NLP is the domain which enables the computer understand human language and determine sentiments and context
 - Using a NLP process developed from scratch by us, it is possible to determine what the complaints are actually talking about, and finally decide under which department the complaint has to be forwarded to
 - For eg, a single complaint can be talking about issues regarding the badly maintained roads and non-functional street lights. Each part of the complaint is intelligently tokenized by the program, and is then put under the categories of “Roads” and “Street Lights”(which would come under Electricity)
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- The different departments could be:
 - Water supply - irregular water supply, quality not good, etc
 - Telephone - Issues with connectivity, services, etc
 - Electricity - Street Lights, Power outages, etc
 - Street Lights - non-functional, lack of street lights in some remote areas, etc
 - Neighbourhood - noise and ruckus, stray dog problems, etc
 - Public Transport - Lack of enough buses, last-mile connectivity issues
 - Cleanliness - garbage thrown on roads, irregular garbage collection, etc
 - Roads - bad quality, potholes, etc



How the Department side can handle it?

- Each department receives only complaints associated to the respective department thanks to the classifier program used
- Each complaint has details regarding the location, date and severity(based on how many citizens are complaining about), and the officials can accordingly approach the issue
- They are given an opportunity to keep in touch with the citizens, regularly posting updates and latest developments on the problem and progress of the solution, which helps informing citizens that constant work has been made



Conclusion

- Thus, we present an effective and convenient method for the users to raise their voices regarding all sorts of day-to-day problems they face in the general public and society
- This method enables the authorities/departments to constantly understand the actual problems faced by the citizens, and thus the overall happiness index of the society
- This allows a healthy exchange of much-needed conversation between the citizens and the government, and also between people in the society(thanks to the discussion forums in the app)
- Thus, this is an easy and scalable approach which provides the most basic citizen services facility, i.e., pay attention to what the people are truly talking about



THANK YOU!!

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