E-GOVERNANCE COMPLAINT APPLICATION

Mr.K.Sriram Kumar[1] , Harikrishna P[2], Kartheepan D[3], Logesh S[4], Shanmugapriyan A.G[5].
Assistant Professor/IT[1],[2,3,4,5]UG Scholar/IT Karpagam Institute of Technology,Coimbatore – 641 105

ABSTRACT

In our daily life we face several issues in our society We have different portal for a particular domains like electrical complaints, water supply complaints etc… While a user is registering a complaint in our portal, this complaint text and images were being analyze using KNN algorithm which can be used for both classification and regression problems. The KNN algorithm uses 'feature similarity' to predict the values of any new data points. This means that the new point is assigned a value based on how closely it resembles the points in the training set, if this complaint already exits complaint will be wrapped under the existing previous complaint . Once the complaint is solved, it indicates the complaint status to all users. If the complaint did not previously exist in any complaints, it will be saved as a new complaint. Furthermore, if the same type of complaint registers multiple times, they will be analyze the severity of the complaint using the SVM algorithm of emotional prediction to identify the severity of the complaint. This algorithm helps us identify the motive and emotions behind a complaint, gain many more insights, and eventually predict the future response and after the prediction of the severity appropriate action will be taken. If the majority of complaints continuously arises, they will be analysed using KNN algorithm. The KNN algorithm is used to classify by finding the K-nearest matches in training data and then using the label of closest matches to predict, after analysing report of reason will send to the admin.

KEYWORDS : Data analytics, KNN algorithm, Emotional prediction, Support Vector Machine(SVM)algorithm

1. INTRODUCTION

There are various web portals for registering complaints. Users have to visit the respective portals to register and check the status of the complaint by visiting that portal individually. Users can't remember the complaint sites, every time it makes it difficult for the user to register the complaint. By using this portal complaints can be sent to respective department for the action. While a user is registering a complaint in our portal, this complaint text and images were being analyze using KNN algorithm which can be used for both classification and regression problems. Then the complaint will be identified by already exists complaints in our portal, if they are already exists the complaint, that complaint was wrapped under the already existing complaint. That if any once the complaint was solved the status of complaint will be indicated to all users. It will be reduced the overburden of department in charges. If the complaint does not previously exist in any complaints using analysing of complaints issue description and the attachments of reference images, it will be saved as a new complaint. Furthermore, if the same type of complaint registers multiple times, that will be analyze the severity of while using SVM emotional prediction algorithm, that will be analyzing the complaint description and location, then the complaints severity is understand , after the action will be taken by the concern department. If the user is not satisfied with the given solution, the user can reopen the complaint to the next level for action, the complaint report will be generated for the admin and the complaint will be forwarded to the concern department. If the user satisfied with the solution provided by the person in charge the report will be generated to the admin and the complaint will be marked as closed.

2. LITERATURE REVIEW

[1]Customer complaints are important information that reveal customer mood and are a crucial evidence of customer dissatisfaction. How well and quickly an organisation addresses these issues is a key indicator of its performance. In addition to encouraging customers to participate in regulating the calibre of the services provided, the customer complaint management system model being presented will be able to lessen customer complaints. In order to increase the connection between citizens and social solidarity, the researcher in this study suggests a revolutionary SOA-based paradigm of an e-Complaint web- service. [2]Citizens' needs are growing and becoming more complex in today's fast-paced environment. However, no one has the time to wait a lengthy period to personally file a complaint as the traditional system requires. We developed the model that tackles this issue since metropolitan inhabitants require a common platform where they can register and track their complaint. Our model's comprehensive approach aims to effectively reduce complaints by pressuring people according to how serious their problems are. The suggested system is derived on machine learning models, sentiment analysis, and natural language processing ideas. It combines the various skills that examine the sentiment of the populace to rank the complaints and group them into the appropriate departments. [3]India's citizens deal with civic issues on a daily basis. They use one of the various channels the government offers to file their grievances. With the development of technology, the grievance registration systems have changed in various ways to make the process easier. This paper outlines the design of a complaint-handling application that civilians can use to file any complaints they may have. The project's primary focus is on complaints pertaining to potholes. Estimating the amount of time and materials needed to fill potholes on widely spaced roadways is one of the most difficult tasks for government officials, and this is one of the main issues they encounter, which causes them to put off fixing the pothole and increased the cost to fill a particular pothole. [4]In the previous municipal systems, one had to visit the office and submit written complaints. Depending on the severity, submitting the complaint in a drop box, to the commissioner, or to the appropriate department may require physical labour and time. Additionally, the complaint's receipt is not acknowledged. Problem resolution is ensured by verbal conversation. As a result, it is not meant to be a tool for addressing problems. To handle citizen complaints more effectively, a better web- based complaint management system is needed. [5]The research's proposed model uses techniques like document term matrix (DTM) driven by TF- IDF (Term Frequency - Inverse Document Frequency) to pre-process raw textual data. Inverse Document Frequency), the embedding model Word2Vec, and the psycholinguistic method Linguistic Inquiry and Word Count (LIWC). The labels "moderate" and "extreme" were used by the three human annotators to categorise the raw textual complaints. A paired t- test performed on the AUC values obtained from different classifiers revealed that the LIWC in combination with the Random Forest and Nave Bayes techniques yields the statistically significant performance. This finding was reached when the researchers applied three feature extraction techniques to the data. [7]Smart mobile devices and websites, which can serve as a foundation for a system for managing complaints, have become more affordable over the past few years and established themselves in the lives of regular people. These devices' GPS sensors offer a vast range of benefits.

3. EXISTING SYSTEM

When the user registers a complaint in the portal regarding their issue, the complaint will be seen by the concern team and action will be taken against the issue, when other users also have the same issues and if they also register their complaints, it will be overburden for the departments in charges to update the status in all complaints.

3.1 Drawbacks of Existing System

- Geo location map is not possible in thecompliant application.
- Uniqueness of the complaint is not possible.
- The major complaints are repeated again and again, so the reason of why major complaints repeated and the report was not submitted to theadmin.

4. PROPOSED SYSTEM

By using our portal users can register various department complaints like electricity complaints, waste management complaints, sewage complaints etc... So users can able to track all the complaints made by him in the single portal. While a user is registering a complaint in our portal, if the complaint already exists, the complaint will be wrapped under the existing complaint. Once the complaint is solved, it indicates the complaint status to all users. If the complaint did not previously exist in any projects, it will be saved as a new complaint. This is possible through the analysis of text and images from user complaints. Furthermore, if the same type of complaint registers multiple times, they will be analyse the severity of the complaint and take appropriate action. The major complaints are repeated again and again, so the reason of why major complaints repeated and the report is submitted to the admin.

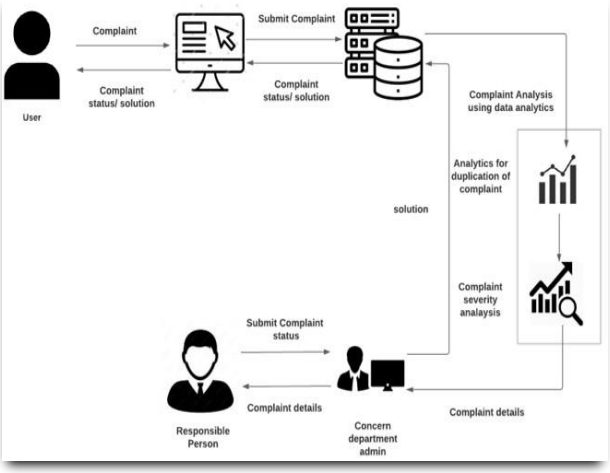

Fig.4.1.Technical architecture for e-governance complaint application

4.1 User Login Authentication

The first step is to create a database to store user information such as username, password, and email address. We can use a database management system such as MySQL. You will need to create a user registration form where users can create their account by providing their username, email, and password. You should also implement password policies such as minimum length, special characters, and numbers. If user successfully registered they will get an confirmation email. After we confirm a mail to redirect the user login page.

4.2 User Complaint

Create a complaint form that allows users to provide detailed information about their complaint. The form should include fields for the user's name, email address, a description of the complaint, and the attachments of images for reference, etc... Implement a tracking system that assigns a unique reference number to each complaint. User can verify the captcha code they are enable to submit the application. Else the captcha code verification is failed they are again redirect to the user complaint module.

4.3 Admin Panels

Create a secure admin login page that requires a user id and password to access. This will prevent unauthorized access to the admin panel. In the admin panel is divided into two types Master admin and department admin. Master admin can view the overall complaints categories and the count of the complaints in the panel. When user is not satisfied with solution provided by the department in charge person the complaint report is generated to the admin. When complaint is closed every time the report for the complaint will be generated to the admin. When the user registers a complaint a notification will be sent to the admin.

4.4 Tracking complaint

Assign a unique reference number to each complaint as soon as it is received from submitting the complaint. This will allow users to enter the tracking id and then track the progress of their complaint and provide updates if necessary.

6. FUTURE SCOPE

If the complaint was registered, that complaint was automatically analysed to determine which department was related, and then the complaint was send to related department. Repeating can cause major issues/impacts complaint will be get triggered to higher level

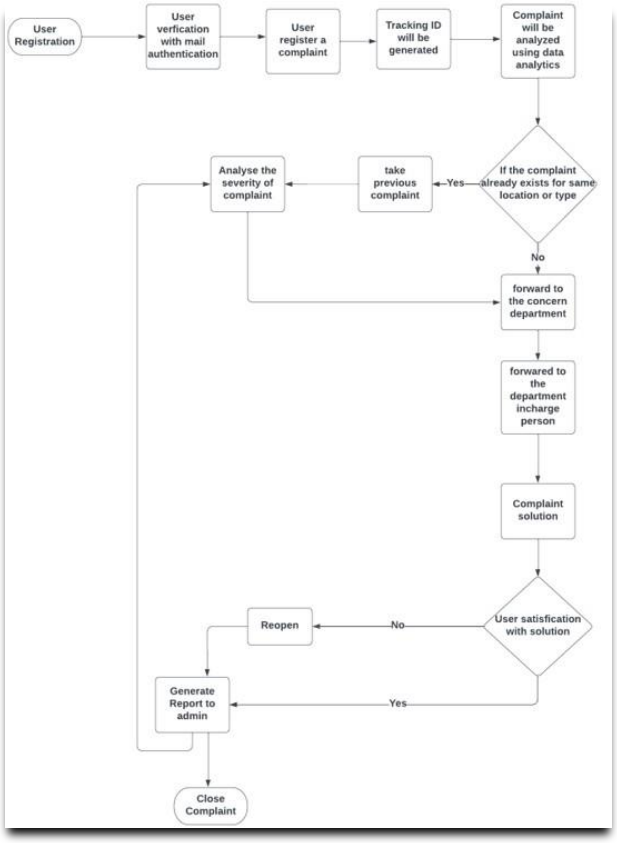

Fig.4.2.Flowchart for e-governance complaintapplication

4.5 Advantages of Proposed System

If the proposed system analysing the duplication of complaints, so they are reduce overburden of duplicate complaints to the concern department in charge. The severity of complaint is analyse they will severity based taken the action. Ifthen the complaints are continuously arrived they analyze and then send to the reason of report to admin.

5. CONCLUSION

In this paper, we create a portal that have features include complaint registration for various departments and track the status of the complaint. If the complaint duplication identified then the complaint will be wrapping under existing complaint and severity will be analysed action will be taken based on the severity. If major complaints continuously registers then the reason of report will be sent to admin.

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