

ROAD DAMAGE AWARENESS USING CITIZEN FEEDBACK

¹ B.Sudha Maduri, ² P.Anusha, ³ S.Tejashwini, ⁴ E.N.V.S.S.Tejaswi, ⁵ Ch.Divya Sree,
⁶ K.Sushma Devi, ⁷ K.Lakshmi

¹ Assistant Professor, ² Assistant Professor, ^{3,4,5,6,7} B. Tech IV, Information Technology
Vignan's Institute of Engineering for Women, Visakhapatnam, India

ABSTRACT

Road accidents are considered the most important problem faced by the public, as they lead to numerous injuries and deaths worldwide. Utmost accidents are caused by mortal error, it is important to be conservative. India is one of the developing countries with the loftiest rate of similar accidents. Thus, transportation authorities, external authorities and the public are fastening on measures to reduce the inflexibility of these accidents in order to reduce the death rate. Some of the causes of road accidents are bad roads, extreme rainfall similar as thick fog, inordinate rain, heavy winds, potholes etc. This design is substantially grounded on the sphere (Android operation Development). The common people under the governance of the government external authorities must deliver their grievances about day-to-day road problems and accidents on roads. In India we do not have any direct communication between the government and public in an effective way for working out the problems. Citizen feedback is an important feature that will enable Government authorities to take timely action on roads not maintained duly and dangerous to travel. This operation is proposed to break this problem, the citizens should deliver their complaints to the government. It will give a common man to present his complaints and problems to external authorities, who also pass them on to the government external authorities to address the road accident in a short period of time. It acts as an interface to register one's complaint and follow it up. It also provides a complaint module which helps citizens to click up a picture of any road problem that people are facing and upload its image, road condition and position along with the complaint. In addition to that it also includes the feedback forms which will enable them to communicate with the government effectively.

Keywords: Accidents, Roads, Authorities, Problem, Feedback, Complaints, Upload, Location, road category, local body, Tokens, status check, email validation, register, resolve.

INTRODUCTION

In India, there's no effective direct communication between the government and its people for issue resolution, i.e., to get a problem fixed in our country, we have to go to the authorities and stay months for it to be resolved when it might be done in a week or even months. Government must re-evaluate how technology may be used to improve citizens end-to-end experience with government services. Creating a "citizen-first" culture is one way to ensure that the requirements of citizens are met first. The ultimate thing is to improve the service and quality we provide, to encourage transparent effective relations and to boost public confidence in government. Through this we can improvise the solutions for citizen issues. Traditional routes for interacting with the part of government, reporting issues, and furnishing input is being replaced by social media and mobile technologies. People can use mobile services like apps and SMS to get the services they need in a more accessible and customized approach to their requirements. These participation tools also promote increased citizen engagement by incorporating them in problem-working and service co-design. To address this issue, the National Informatics Centre preliminary developed a website called Prajavani, where the public may lodge desires or enterprises and have them resolved within a certain time frame, still because of its inefficiency and lack of stoner benevolence, it was not extensively used by citizens, and its limited translucency redounded in its lack of fashion ability. The major thing of this design is to help the public in learning about their position, as well as having their enterprises fixed online rather than having to see the officer in the spot on frequent base until the situation is resolved. Through this the public will able

to save time by using this system. India's road network, besides being the lifeline of the Nation and a major contributor to socioeconomic growth and development, also has the largest donation to accidental deaths in the country with road accidents counting for 36- 38(There were a normal of deaths due to other causes during the period from 2015- 19.) Road accidents have been the leading cause of deaths worldwide during the last three decades it has been the number- one killer in utmost countries. The road features similar as straight stretches, twisted roads, and crossovers position of acquiesce, potholes etc., are some conditions for road accidents. Weather conditions will not only impact just the road face condition but also the visibility of the road thereby adding chances of road accidents. Heavy rain, thick fog and hail storms reduce visibility and make the road face slippery therefore posing serious pitfalls to the road. Utmost of the causative factors the road accidents in India are caused due to either road terrain related issues or due to mortal factors. Transportation authorities and the public are fastening on measures to reduce the inflexibility of these accidents in order to reduce the death rate. Some of the causes of road accidents are mortal crimes, Extreme rainfall similar as thick fog, inordinate rain, heavy winds.

LITERATURE SURVEY

[1] Devendra Yadav, Akhilesh Kumar Yadav "Municipality Complaint Redressal System-A Review" The ordinary people who fall under the governance of the external authorities must deliver their enterprises regarding day- to- day problems in their ward. In India, there is no effective direct connection between the government and the general public. External Complaint Redressal System will be a Mobile grounded operation. This operation will allow citizens to use a mobile operation to file enterprises about day- to- day difficulties in their ward. This operation will allow the average person to register his or her enterprises and difficulties with external authorities and will allow external authorities to handle the issue as snappily as doable. This system provides a user-friendly interface for filing a complaint, allowing citizens to voice their enterprises and follow their progress. To help overloading officers with false complaints, we enforced a machine learning algorithm to distinguish between fake and genuine complaints. This system will also have a dashboard that allows a director to track the performance of each department grounded on active complaints and complaints resolved, as well as the average time it takes to handle a complaint. Once registered, this complaint will be encouraged to a specific department of the Municipal Corporation, for illustration, a complaint regarding a broken road will be diverted to the Public Works Department. When a complaint is encouraged to the applicable ward, officers may take the necessary way and trace the problem.

[2] Panjamani Anbazhagan, "Classification of road damage due to earthquakes"

Earthquakes Beget massive road damage which in turn causes adverse effects on the society. Former studies have quantified the damage caused to domestic and marketable structures, still not numerous studies have been conducted to quantify road damage caused by earthquakes. Further In this study, an attempt was made to propose a new scale to classify the road damage due to earthquakes based on the data collected from major earthquakes in the past. This paper presents different road damages due to the earthquakes based on MMI scale. The study shows that MMI scale has limited operation to classify damaged road due to earthquake. Further, a new RDS had been proposed for the classification of damaged road due to earthquakes. The proposed scale called as RDS, have identified five situations of road damages on different parameters and reported how earthquake had damaged the roads.

[3] Jun Li1, Qiming Qin1, "Study on Road Damage Assessment using RS and GIS"

A different and new approach for road damage evolution is presented in this paper. The proposed system is applied in the damage assessment of roads. The input data of the damage assessment process is the devastated region of road that is the difference between the pre-disaster road area and the post-disaster complete road area. The devastated region is segmented into small damage blocks. The segmentation process is like to cut every pixel to search for the damaged pixels. When identified a damaged pixel it is used as a seed point to trace the whole damage block with region growing system. We will keep on searching unless every damaged pixel has been covered. At last, the devastated region is segmented into a number of independent damages carrying the values of assessment indicators. The damage position is graded by the assessment model. This paper states the assessment results at three situations — damage block position,

single- road position and region position. At damage block position, the detailed information of damage blocks is affair, which helps to conduct and instruct the post-disaster reconstruction work. A new approach of road damage assessment is presented in this paper.

[4] Hiroya Maeda, Hiroshi Omata, “Road Damage Detection and Classification Using Deep Neural Networks with Smartphone Images”

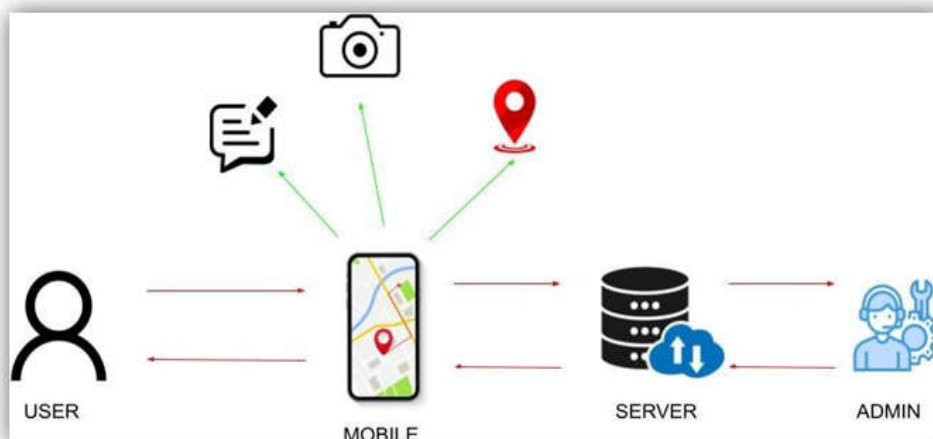
In this paper a check of damage discovery of roads using image processing ways have been conducted. This study makes three benefactions to address road damage discovery issues. First, to our knowledge, a large-scale road damage data set is set, comprising, 53 road damage images captured using a smartphone installed on an auto, with, 435 cases of road face damage included in these. They've used state- of- the- art object discovery styles using convolution neural networks to train the damage discovery model with their data set and compared the delicacy and runtime speed on both, using a GPU garcon and a smartphone. Eventually, in this paper they have demonstrated that the type of damage can be classified into eight types with high delicacy by applying the proposed object discovery system.

PROPOSED SYSTEM

We want to replace existing manual RCS (ROAD COMPLAINT SYSTEM) with an android application. This will change the way that road complaints are maintained, improve efficiency, and save us time. By using this application people can register their complaints in an easy and proper format and give their location so that authorities can easily find them when they need help. We hope that these improvements will benefit everyone who uses our service more easily. The system will also acknowledge about their complaints progress. The user posts feedback about this RCS and an admin can view that feedback. User facilities are available for officers to solve their problems in an efficient manner, with a complete picture of the place shown. The user can suggest solutions for solving problems in a better way, and can give their opinion on government decisions. It accepts the complaint request from citizens and routes it to a specific department for processing. A request may contain one or more of the following: an image, text and location.

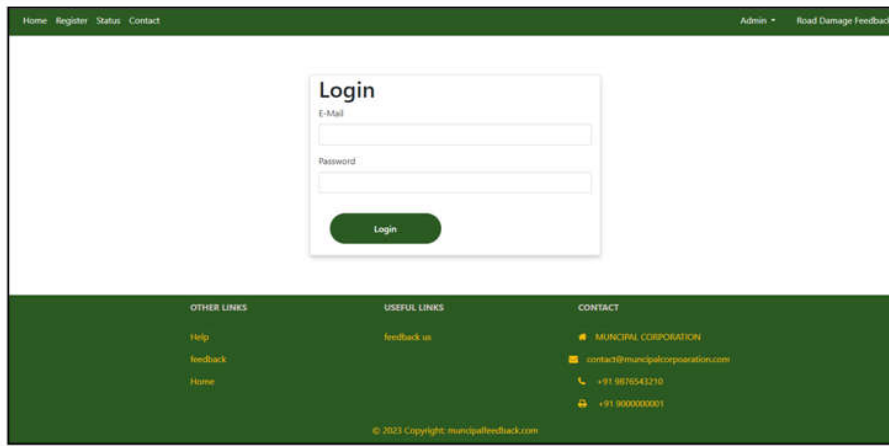
The system proposed offers the following advantages: It can be used to comply with the requirements of any user at any time. The processing is done in the minimum time possible, so that our services are better and more efficient. The system is user friendly, so that it is easy to use, without having to read many instructions. It requires minimal effort on the part of users and minimizes manual data entry.

PROPOSED SYSTEM ARCHITECTURE & DESIGN

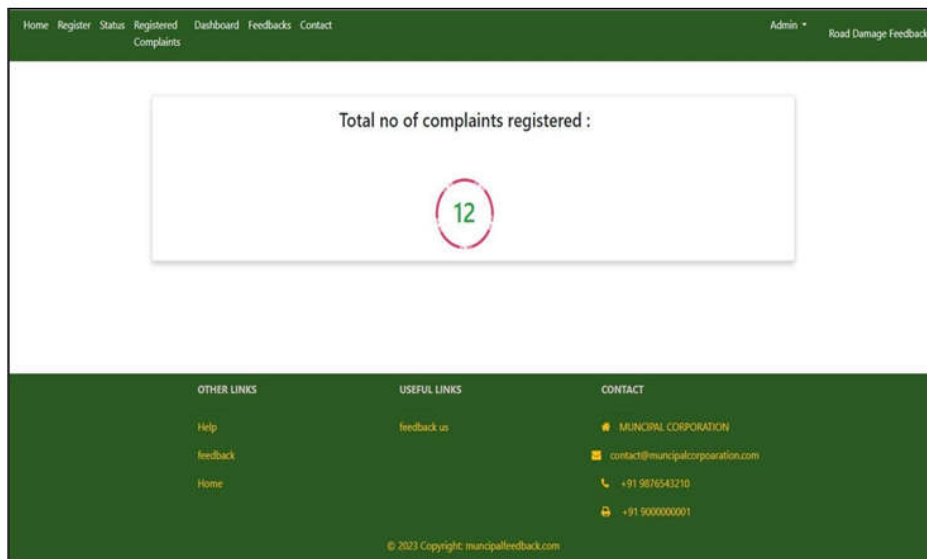


RESULTS AND DISCUSSIONS

ADMIN MODULE:
LOGIN PAGE



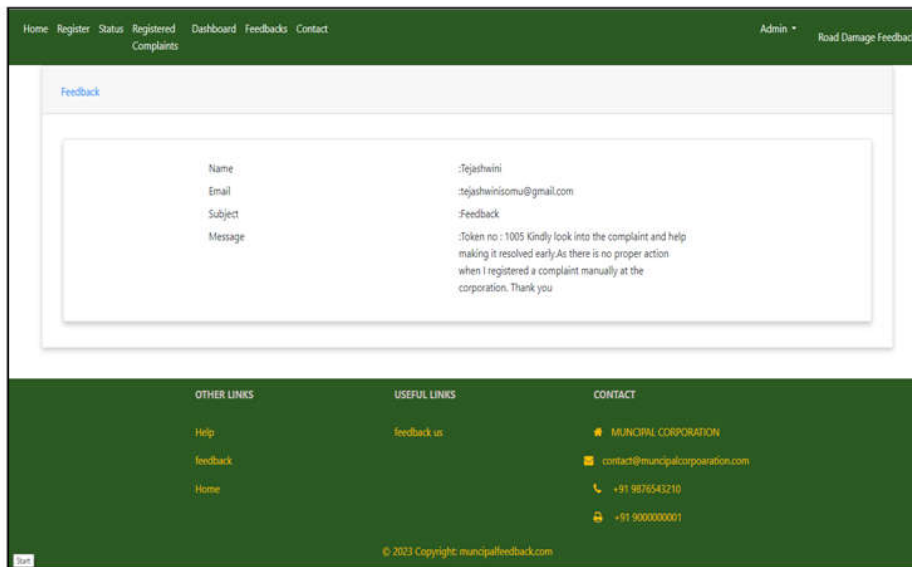
DASHBOARD



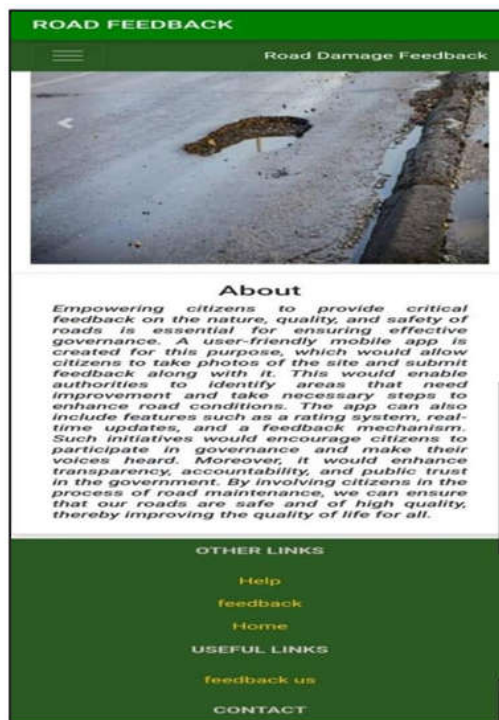
REGISTERED COMPLAINTS

Registered Complaint : 1003							
Name	Category	Loaction	District	Description	Image	Status	Change Status
teju	Others	View	noida	View	View	not checked	Rejected change
Registered Complaint : 1004							
Name	Category	Loaction	District	Description	Image	Status	Change Status
sudha	Others	View	viskhapatnam	View	View	not checked	Rejected change
Registered Complaint : 1005							
Name	Category	Loaction	District	Description	Image	Status	Change Status
sudha	Potholes	View	viskhapatnam	View	View	under processing	Rejected change
Registered Complaint : 1006							
Name	Category	Loaction	District	Description	Image	Status	Change Status
TEASHWINI	Uneven Roads	View	viskhapatnam	View	View	under processing	Rejected change

FEEDBACK



USER MODULE:
HOME PAGE



REGISTER COMPLAINT

ROAD FEEDBACK
Road Damage Feedback

Name

E-mail

Select Category **Muddy roads** ▾

District

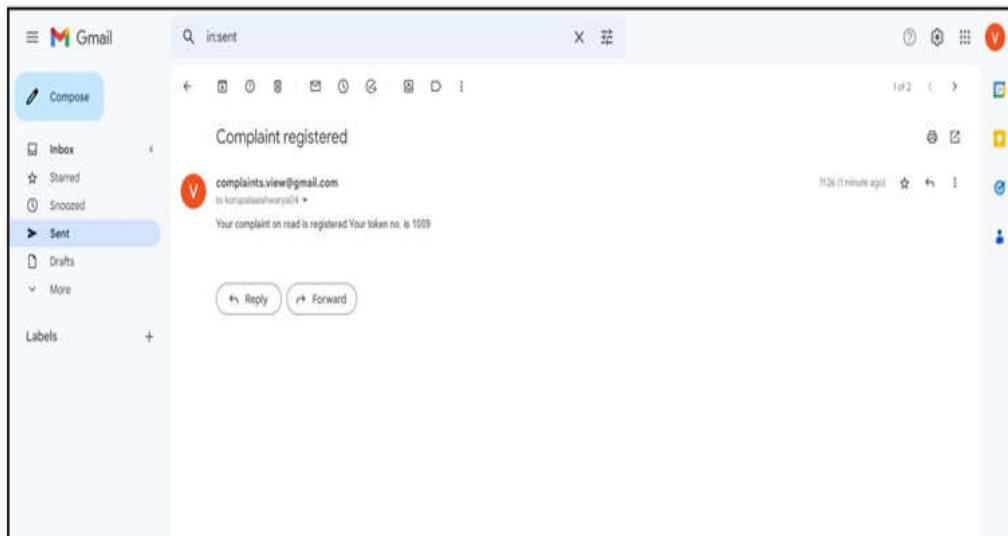
Local Body

Location

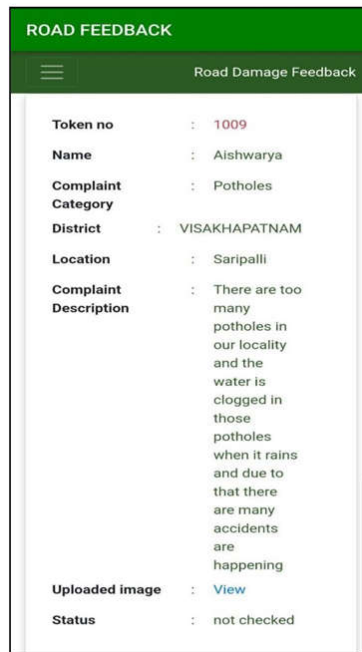
Description

Upload images
 No file chosen

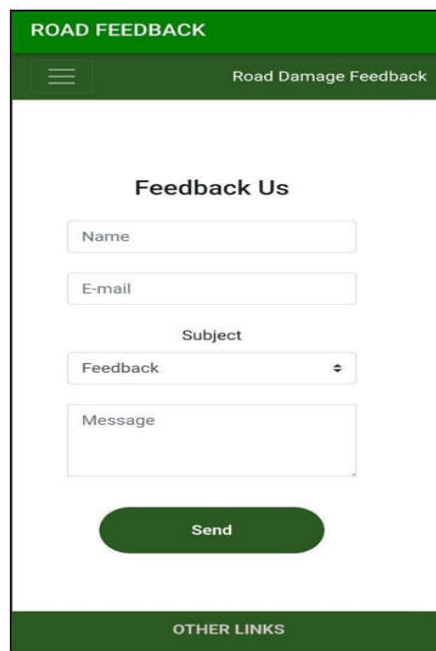
EMAIL VALIDATION



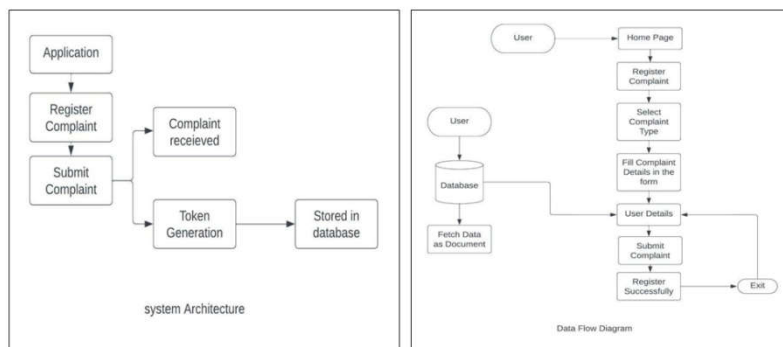
STATUS OF COMPLAINT

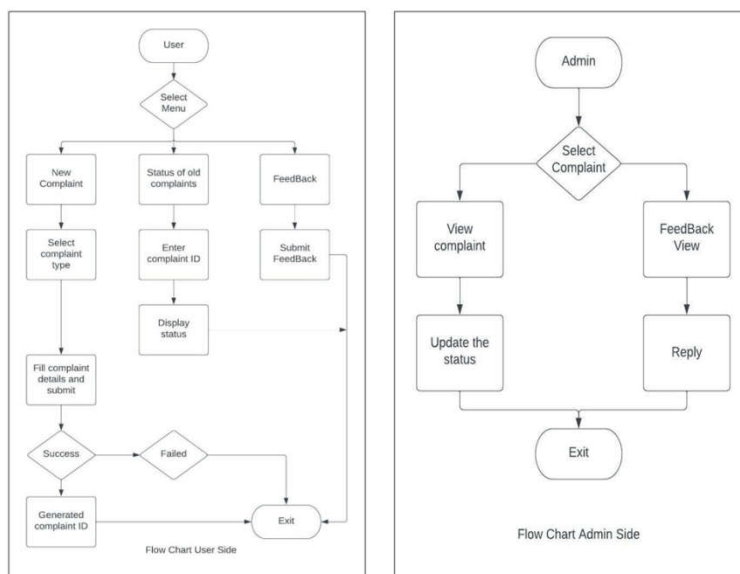


FEEDBACK



UML DIAGRAMS





CONCLUSION

In this model, it is explained about the working procedure of the system, the places involved in the system and the conditioning. It presents the overview of the analysis and development of theMunicipal Corporation Road complaint operation system. There will be remarkable results attained by this design and also, they help in encouraging the development of this type of road complaint operation systems. Generally, the complaints and other types of feedback play an important part in the development of any association and to interact with the authorities in a better way. This system can be taken as an inauguration for the systems which will be developed indeed more in future and which are related to road complaint operation systems.

FUTURESCOPE

As of now there is no proper existing system for feedback on maintenance of roads. The citizen should have to register his complaint manually and report at their respective municipality, to avoid this situation we have created this user friendly app in which the user need not sign up but directly register the complaint. There is a chance for the concerned authorities to neglect the complaints givenby the citizens through this application, to overcome that we want to develop in future a grievance profile which will be under the control of the grievance department. By doing such the citizens can complaint to the grievance about the municipal authorities who are not responsible enough to resolvethethe problems of the citizens.

REFERENCES

1. Ozeki NG SMS Gateway, "SMS Gateway-for Software developers and Serviceproviders," Viewed Jul. 2012; <http://www.ozekisms.com>.
2. Pimpri Chinchwad Municipal Corporation, "SMS and Web-Based Complaint MonitoringSystem,"ViewedJul.2012;<http://www.asci.org.in/ICT/Resources/CaseStudies/CITIZENCENTRIC/32SMS%20&%20Web%20based%20Complaint%20Monitoring%20System%20Pimpri%20Chinchwad.PDF>
3. C. Chiao-Chen and C. Yang-Chieh, "Comparing consumer complaint responses to online and offline environment," Internet Research, vol. 21, pp. 124-137, 2011.
4. Aditi Mhapsekar, Uma Nagarseka, Priyanka Kulkarni and Dhananjay R. Kalbande. "Voice enabled Android application for vehicular complaint system using GPS and GSM-SMS technology," in World Congress on Information and Communication Technologies, 2012, pp. 520-524.
5. "Google Maps Javascript API v3." Internet: developers.google.com/maps/web/, [Apr. 25, 2014].
6. "Camera."Internet:docs.phonegap.com/en/3.3.0/cordova-camera-camera.md.html,[Apr. 25, 2014].

7. Ahmad Shukri Mohd Noor, "Distributed Java Mobile Information System," Communications of the IBIMA, vol. 10, 2009.
8. J. F. J. Vos, et al., "How organisations can learn from complaints," The TQM Journal, vol. 20, pp.8-17, 2008. [CrossRef]
9. K. Coussement and D. Van den Poel, "Improving customer complaint management by automatic email classification using linguistic style features as predictors," Decision Support Systems, vol. 44, pp. 870-882, 2008.
10. R. Johnston, "Linking complaint management to profit," International Journal of Service Industry Management, vol. 12, pp. 60-69, 2001.
11. V. Bosch and F. Enriquez, "TQM and QFD: exploiting a customer complaint management system," International Journal of Quality and Reliability Management, vol. 22, pp. 30-37, 2005.
12. Liu Yalan, Zhang Yong etc, "Highway Damage Monitoring and Assessment for Wenchuan Quake Based on Remote Sensing and Its Information Integration," *Journal of Remote Sensing*, vol.12, No.6, pp. 933-940, 2008
13. Haijian Ma, "Research on Road Damage Detection from High Resolution Remotely Sensed Images for Disaster Evaluation," *Doctoral Theses*, Peking University, Beijing, China, 2009
14. Soni, Chetana M. et al. "Integrated Web Based Complaint Management System." International journal of engineering research and technology 5 (2018): n. pag.
15. "MUNICIPAL CORPORATION COMPLAINT MANAGEMENT SYSTEM USING WEB APPLICATION", International Journal of Emerging Technologies and Innovative Research (www.jetir.org), ISSN:2349- 5162, Vol.8, Issue 5, page no.a313-a321, May-2021
16. Nasr, Osman & ali, enwa. (2015). Online Complaint Management Systems. International Journal of Science and Research (IJSR). 2. 305-307.
17. Goh, Kim Nee, et al. "Architecture of a GPS-based road management system." World Appl Sci J 12 (2011): 1256.
18. Sousa, Sergio & Abreu, Patrícia & Lopes, Isabel. (2012). Using Six Sigma to improve complaints handling
19. Mhapsekar, Aditi & Kulkarni, Priyanka & Nagarsekar, Uma & Kalbande, Dhananjay. (2012). Voice enabled Android application for vehicular complaint system: Using GPS and GSM-SMS technology. 520- 524. 10.1109/WICT.2012.6409133.
20. Aparna, Yukti Bhatia, Rachna Rai, Varun Gupta, Naveen Aggarwal, Aparna Akula, Convolutional neural networks based potholes detection using thermal.