Public Complaint Sorting Using Image Processing

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ABSTRACT:
Reporting any Civic or day to day life problems has no longer been an easy process for the citizens. They have to follow a long procedure and formalities to register their problems or to report such problems like street damages, garbage management problems (garbage bin over owing), Electricity problem, Water problem etc. in short citizens can post their problems which come under the surveillance of municipal.
Currently civic issues are left unattended due to time consuming procedure so our aim is to design a system to solve civic issues easily with least manual interference. There is still no guarantee   that   the   reported grievances would be resolved or addressed by the concerned municipal departmentauthority.
To make an easy reporting systemfor complaining procedure, we are going to implement a machine learning online web application that will provide a platform for citizens to raise their voice against civic issues and report their problems with infrastructure in their city to relevant municipal department.
So, whenever people come across any civic issue in city infrastructure or any daily life disturbance they can share, discuss and get resolved the problems by concerned department's authority by means of this online web portal. Citizens can share their ideas, suggestions with each other and they can also view the problems posted by othercitizens.

I.   INTRODUCTION

To improve Infrastructure and condition of our city and to make people take helpful to collect valuable source as feedback from citizens about progress improvement of city through the different posts or images posted by citizens. This is flexible and interactive interface for people to use application for register complaints and to share ideas, this system to provide flexible communication platform for citizens. It will be helpful to resolve posted problems in limited time.

The main purpose of the system to resolve problem in less time and to keep track on all process which will going on after registering particular complaints.Municipal authorities and users both will get notifications from each other. System is using the hierarchy of different level of authority like user level then departments and their authorities and finally higher authority, this will be more effective to keep the track on each and every work related to civic issues posted by citizens. To develop this system, we use machine leaning and image processing.

II.   LITERATURE REVIEW

Towards Two-Tier Citizen Sensing, Citizen Sensing is a powerful paradigm involving citizens collectively participating in data collection. The pervasiveness of mobile devices has taken citizen sensing to unprecedented levels of adoption, as anyone with a phone can easily participate. A delegated authorization solution for smart-city mobile, an increasingly popular scenario for Smart Cities is the one in which mobile apps attempt to access resources (e.g., open data about public transportation or e- government services) made available by city authorities through the use of Application

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There is a growing awareness of the benefits of using APIs to foster civic engagement through a more efficient and personalized delivery of government services, and as an enabler of a new wave of innovation contributing to a more automated and sustainable city functioning. Tools enabling online contributions by older adults. In this paper they implemented tool for contribution from older adults' citizens. The results are of particular importance for the development of technology that aims at reducing social isolation for people with less chances to interact, such as older adults. Service-learning project for computing students: Creating a mobile app for a non-profit agency, Over the last 15 years the world as seen a surge in users owning smartphones and electronicdevices.

People today have smartphones that have the computational capabilities of computers from more than 45

years ago. With the growing populous under this information age, individuals have access to so much data. It is a fantastic time to spread ideas as anyone can reach anybody else over the internet almost instantaneously. It is not too di cult to get into contact with anyone even if they are on the other side of the globe. This is the power of the 21st century and which has generated a team- oriented society. World Social Welfare Circumstances: Social Welfare and Elderly Care System in the World, and Civic Technology Chisako Yamashita This paper illustrates social welfare and elderly care system and issues in three countries, Japan, Norway, and the United States, and discuss how to solve social problems by using civic technologies.

Citizen emotion analysis in Smart City Applications in Smart City context isimproving the quality of life of citizens through several technological interactions. These interactions can be also used to relate the citizen's emotions to city areas. Thus, the main objective of this work is to present a smart phone application. Social Media Based App Organizing Daily Events Since the primary attraction for IT developers is to build applications by reusing the existing resources, especially using mobile platforms as it is changing the way software applications are developed and accessed, the platform presented in this paper aims to keep users up to date for all of their dailyevents.

The idea was to develop a new contemporary application for the mobile platform that will be able to integrate several social media APIs. While selecting sources and notification time, the proposed implemented platform will be able to generate a to do list of the daily events, offering high flexibility and portability. Gram Sandesh Transmission-A Web Based Information System for Farmers in This the experimentation done in order to flourish a low price and impressionable information system to provide useful information to farmers in a timely manner so as to assist their decision- makingprocess.

The primary reason behind development of this system was to automate the flow of information to farmers since agriculture is the backbone of our country. Gram Sandesh Transmission is a web disciplined system which targets all sort of audience by means of its iOSapplication (for iPhone users), android application (for android users), messaging server (for basic mobile handset) and gsm based.

EXISTING SYSTEM
The existing system is a manual process, and it consumes more time. It needs more resources, and the citizens are not bothered about which department they have to give a complaint to. Thus, citizens are not reporting the complaints which they knew.

LIMITATIONS IN EXISTING SYSTEM
The main disadvantage is that there will be lot of difficulties for the citizens, when they must directly consult the offices to apply the complaints. It needs more resources and there is a chance to not resolve user problems. These procedures will be a time consuming when it uses the existing system because the processes are all done manually by the members in each department. To avoid all these limitations and make the working more accurately the system needs to be computerized.

PROPOSED SYSTEM
This system focuses on flexible communication between citizen to citizen and citizen to respective authority. An Implementation of web application in which there will be the flexible communication so that each citizen can raise their voice against various civic issues with the least manual interference. This application gives one to many and many to many communication bonds between people. Through this website citizens can register their civic complaints in very flexible way within less time. All the issue which is been register to the web portal will be resolved within date andtiming.

ADVANTAGES OF PROPOSED SYSTEM
* It is versatile, flexible, and costefficient.
* No timeconsumption.
* The main purpose of the system to resolve problem in less time and to keep track on all process which will going on after registeringcomplaints.

SYSTEM IMPLEMENTATION MODULE DESCRIPTION
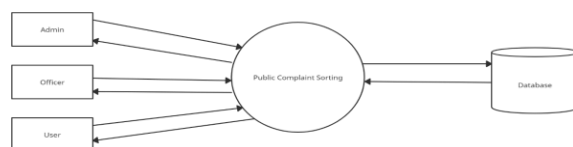The system is proposed to have the following modules,
* Admin
* Officer
* Use

Fig.5.1 Level 0 System Design

ADMIN
- Admin can viewusers.
- They can add and managedepartment.
- They can add and manageofficers.
- They can view feedback given by the users.
- They can view department wise complaints given by the users, but they can't reply to thecomplaints.

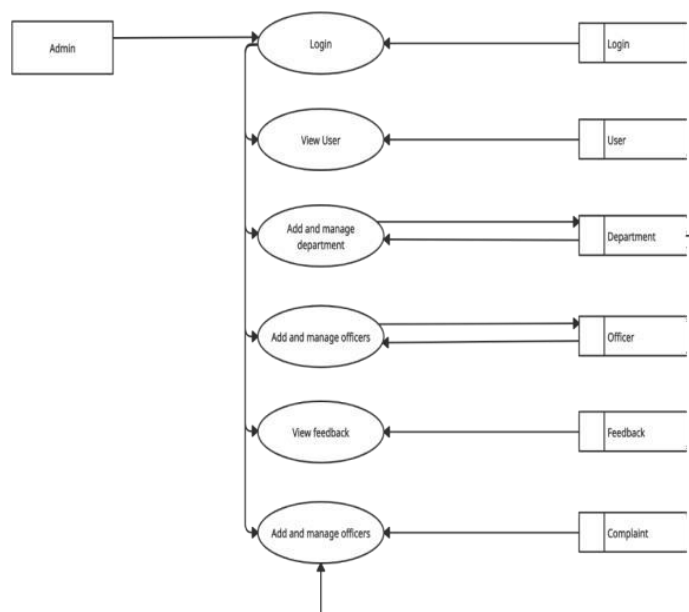**OFFICER**
- The officer will be added directly by theadmin.

Fig.5.1.1(a) Admin User

- The officer is who can view the complaints given by the users and can reply for thecomplaints.
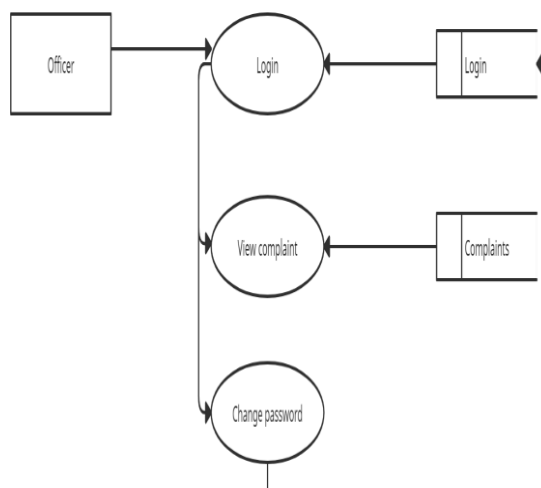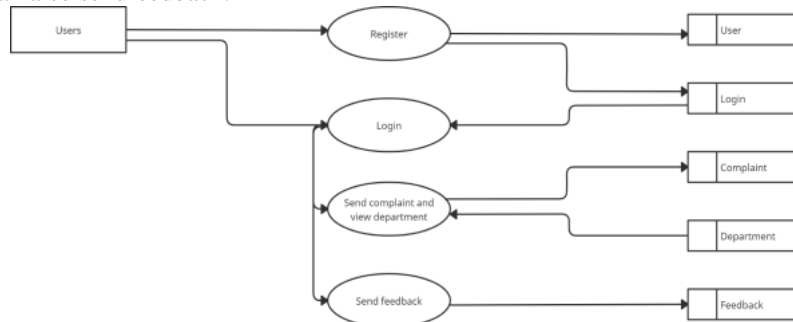- Officer can change their passwordalso.

Fig.5.1.2(a) Office

USERS

- Users can register bythemselves.
- They can send complaints and view the respectivedepartment.
- They can also sendfeedback.

Fig.5.1.3(a) End Users

III.   CONCLUSION

In this, an effective implementation for Image Processing and Machine Learning concept is used for solving Citizen's problem. This presents a conceptual architecture for a versatile, flexible, and cost efficient for monitoring the citizens issues. We propose one application using machine learning and image processing in which citizens can register or post their civic issues online and they can also have assured that their problem will be resolved within the timing given by them or by authority.

REFERENCES

[1].   Julio Borges, Matthias Budde, Oleg Peters, Till Riedel and Michael Beigl, "Towards Two Tier Citizen Sensing", IEEE International Smart Cities Conference (ISC2) Year:2016.
[2].   GiadaSciarretta, Roberto Carbone, Silvio Ranise, "A delegated authorization solution for smart city mobile applications", IEEE 2nd International Forum on Research and Technologies for Society and Industry Leveraging a better tom orrow (RTSI) Year:2016.
[3].   F. Ibarra, O. Korovina, M. Baez, G. Barysheva, M. March-ese, L. Cernuzzi, and F. Casati, "Tools enabling online contributions by older adults", IEEE Internet Computing, vol. PP, no. 99, pp. 1 1,2016.
[4].   SonalAsija, Jean F. Coppola, "Service-learning project for computing students: Creating a mobile app for a nonprofit agency", IEEE Long IslandSystems, Applications and Technology Conference LISAT), 2016.
[5].   Chisako Yamashita, "World Social Welfare Circumstances: Social Welfare and Elderly Care System in the World, and Civic Technology Chisako Yamashita", International Conference on Computer Application Technologies,2015.
[6].   VlberCsarCavalcantiRoza, Octavian Adrian Postolache, "Citizen Emotion analysis in Smart City", 7th International Conference on Information, Intelligence, Systems amp; Applications (IISA),2016.
[7].   Satish Kumar Prasad, RiteshPatil, SagarBeldare,Pro f. Anita Shinde4, "Civic Complaint Application under Smart City Project", (IJCSIT) International Journal of Computer Science and Information Technologies, 2016.
[8].   ErenisRamadani, AgonMemeti, FlorindaImeri, NexhibeSejfuli, R amadani, FlorimIdrizi, "Social Media Based App Organizing Daily Events", 6th MediterRanean Conference on Embedded Computing (MECO), 11 - 15 JUNE2017.
[9].   Emanuel Sanchiz, Francisco Ibarra, SvetlanaNikitina, Marcos Baez and Fabio Casati, "A Study on Social Interactions and Common Life Points on Facebook", International Conference on Collaboration Technologies and Systems,2016.
[10].   Parvgupta, RanaMajumdar, Mrigendrakumar, NishantChauhan, Subhash Chand Gupta, "Gram Sandesh Transmission - AWebBased Information System for Farmers", IEEE Conference on Computer Application Technologies,2015.
[11].   C. Huang, L. S. Davis, and J. R. G. Townshend, "An assessment of support vector machines for land cover classification," Int. J. Remote sensing, vol. 23, no. 4, pp. 725–749,2002.
[12].   PabitraMitra*, B. Uma Shankar, Sankar K. Pal, Pattern Recognition Letters 25 (2004)1067−1074.
[13].   Gr´egoire Mercier and Marc Lennon, "Support Vector Machines for Hyperspectral Image Classification with Spectral-based kernels," IEEE Transactions 2003, 0- 7803-7930-6.
[14].   M. Budde, J. Borges, S. Tomov, T. Riedel, and M. Beigl, "Leveraging spatio- temporal clustering for participatory urban infrastructure monitoring," in First International Conference on IoT in Urban Space,2014.
[15].   T. De Smedt and W. Daelemans, "Pattern for python," The Journal of Machine Learning Research, vol. 13, no. 1, pp. 2063–2067,2012.

[16]. R. Narayanan, B. Liu, and A. Choudhary, "Sentiment analysis of conditional sentences," in Proceedings of the 2009 Conference on Empirical Methods in Natural Language Processing: Volume 1-Volume 1. Association for Computational Linguistics, 2009, pp.180–189.

[17]. F. Restuccia, S. K. Das, and J. Payton, "Incentive mechanisms for participatory sensing: Survey and research challenges," arXiv preprint arXiv:1502.07687,2015.

[18]. J. Brooke et al., "Sus-a quick and dirty usability scale," Usability evaluation in industry, vol. 189, no. 194, pp. 4– 7,1996.

[19]. M. Seetha, I.V. Muralikrishna, B.L.Deekshatulu, B.L. Malleswari, Nagaratna,

[20]. P. Hegde, "Artificial neural network and other methods of image classification", Journal of Theoretical and Applied Information Technology © 2005 - 2008 JATIT.

[21]. C. J. Burges, "A tutorial on support vector machines for pattern recognition," in Data mining and knowledge discovery, U. Fayyad, Ed. Kluwer Academic, 1998, pp. 1– 43.

[22]. MilošKovaevi, BranislavBajat, BranislavTrivi, RadmilaPavlovi, "Geological Units Classification of Multispectral Images by Using Support Vector Machines", 2009 International Conference on Intelligent Networking and Collaborative Systems, 978-0-7695-3858-7/09.

[23]. S.V.S Prasad, Dr. T. SatyaSavitri, Dr. I.V. Murali Krishna, "Classification of Multispectral Satellite Images using Clustering with SVM Classifier", International Journal of Computer Applications (0975 – 8887) Volume 35– No.5, December2011.