

# Smart City Application with Reference to City Stress

Ghousa Parveen<sup>\*1</sup>, T M Kiran Kumar<sup>2</sup>

<sup>1</sup>Post Graduate Student, <sup>2</sup>Assistant Professor

Department of Master of Computer Applications, Siddaganga Institute of Technology, Tumakuru, Karnataka, India

**Abstract**---Smart City Application with reference to city stress is an Android Application. This application is used to capture the real time data of the user from anywhere and it is secured, user-friendly. This application is mainly built to report the issue that citizens are facing in their daily life.

The issues that would indirectly stress the civilians namely like Garbage, Violations (Illegal Posters), Potholes, Environment (Plastic Usage). This application helps citizens to report their issues to the higher authorities. Reported issues can be seen by the administrator and the higher authorities in the method of interactive data analysis dashboards. The main features of this application are Capturing Geo-Location Dynamically using Google Maps, Real Time Data Capture like (capturing current location of user, time and date) and User Anonymity.

**Keywords**— Android Application; city stress; Capture Geo-Location; higher authority; post problem;

## I. INTRODUCTION

The main aim of this application is to report the problem that citizens are facing in their daily life.

Our application is mainly built of crowdsourcing process. Crowdsourcing is a routine in regard to drawing in nationals, or a gathering of individuals with shared objectives. It frequently aims in innovation, problem solving, or efficiency. It is driven by new technologies, social media and web. Millions of people connect by Internet, are underwriting their ideas and information to projects which are big and small. Crowdsourcing, as it is called, is helping to solve tricky problems and providing localized information, using our android application. The application can display the user's current location to know where exactly they are facing the problem.

In our daily life we are facing many problems like traffic, garbage, violations, potholes, traffic, environmental problems we cannot solve these problems directly without the help of our higher concerned authorities. Our android application is mainly built for citizen to report the city problems.

Smart City Application with reference to city stresses is an android application which is developed with special interest on the city stress like Garbage, Violations (Illegal Posters), Pot Holes, Environment (Plastic Usage). This application helps citizens to post their issues to the higher authorities. For example, if users want to post the problem about potholes they can take an image or they can comment about the problem and they can post it in the application. The posted problem can be

seen in the dashboards as well as in mobile application also by concerned authorities.

This application helps citizen to post the problems like,

- Garbage
- Potholes
- Violation
- Environment

If People are facing problem about garbage they can make use of this application. For example if a person is using this application whether he/she wanted to post the problem about garbage they can just take the picture of the garbage problem and they can post in this application or else they can just comment the problem and then post it. The posted problem will be seen by the admin through database and as well as in the dashboards. Users information will be private it would be seen by admin only.

This procedure should be followed for all the other stress like Violations (Illegal Posters), Environment (Plastic usage), and Potholes.

The main features of this application is

- Capturing Geo-Location Dynamically—This application can display the user's current location in posting their issues. By having this feature it will helpful for developers to know where exactly the problem is located in the city.
- Real Time Data Capture—The data entered by the user can be used in a controlled fashion in such a way that the system can meet the timing requirements.
- User Anonymity—The information about users will not be seen by others. It can be seen only by the admin of the application.

## II. RELATED WORKS

This section is aimed to identify that where the smart practices for cleaning the city has been take over. Firstly while examining a recent report [1] highlighted that city wastage may become smart by installing sensors at the bins with the well-designed framework. While it is so far a good idea for the garbage disposal problem that to install sensors as mentioned [1]. There are many ways for making the city smart as mentioned in [2] real data can be captured by the user's mobile for making the traffic issues solved by detecting that

where the traffic is more. As mentioned in [3] [4] the way of crowdsourcing i.e. people by communicating with the each other they can make easy of their daily travelling system. Meanwhile we all are aware of the potholes problem, this has been tried solve by [4] creating a smart application of detect the location of potholes in Boston, in the way of StreetBumps i.e. it belongs a crowdsourcing application by converting the humans in to sensors. In this smart city application with reference to city stress is trying to adopt some techniques [2] of capturing the user’s mobile information to know their location where the issue is situated and the way of [3][4] communicating citizens to the higher authorities through this application is the way of crowdsourcing as mentioned [3][4] in the recent reports.

### III. WORKFLOW OF AN APPLICATION

- New user would register into the application by choosing the register button with genuine credentials.
- At that point, developers designed the app in such a way that, it should pass all the credentials to database authentication so that MYSQL backend services will check those credentials and restore a response to the customer.
- After the successful sign in of the user, developer will get the users fundamental information, and can control the user’s appearance.
- The registered user will directly redirect to the stress screen to choose what type of the stress (Potholes, Violation, Garbage, and Environment) they want to report on.
- After choosing the stress they will be redirected to the maps screen, there user will get their current geo location in the way of Google maps. On the screen they will get a camera and comment button.
- By choosing the camera button they will get a camera screen to capture the stress and captured image will be stored in local storage and it will be uploaded to the database.
- By choosing the comment button user will get a comment dialog box, there user can comment the issue and they can post it. The posted comment will be stored into the database.
- The reported issues will be seen by the developers through dashboards and they will post those issues to the higher authorities.

The workflow of this application is shown in the below flowchart

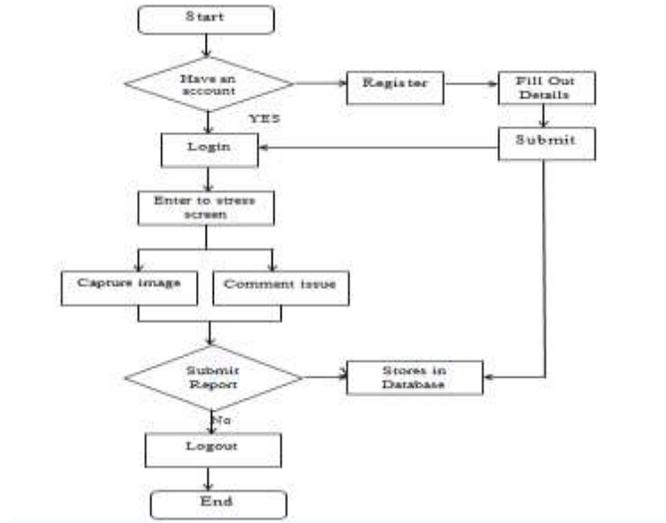


Fig 1: Working of the Application

### IV. FRAMEWORK OF THE APPLICATION

A new user can get registered into the application to report the issue by choosing the specific stress. The below Fig 1 explains that how a new user can get registered into the application.

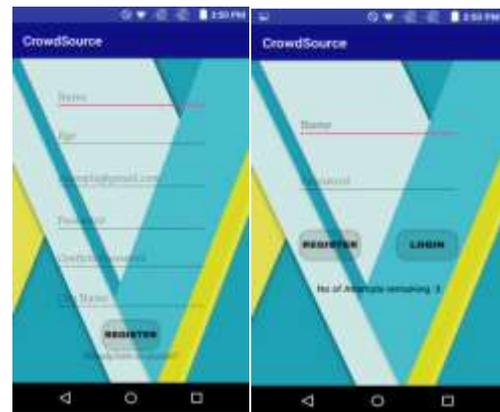


Fig 1: User Registration and Login Screen

The Stress would be mentioned as below.

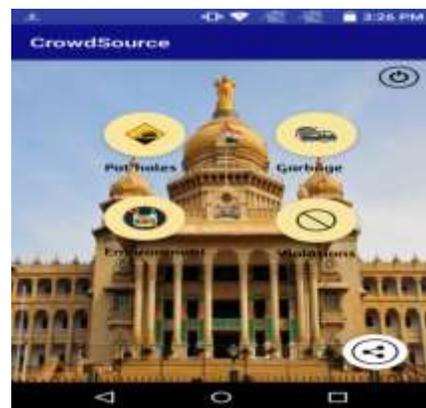


Fig2: Stress which user wants to choose.

By choosing anyone of these stresses mentioned in Fig 2, user can post their problems.

If user wants to post the problem about violations i.e. posting illegal posters in the public places they can choose the violations button and they will get their current location and they will find the camera and comment buttons shown as below,

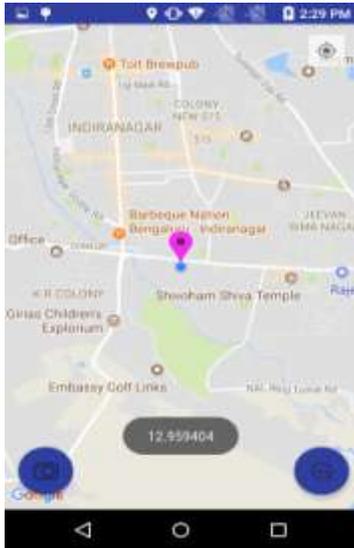


Fig 3: Users current location and reporting screen.

User can post the problem in two ways they can choose camera button to click image and post it and they can choose comment button and comment the problem and submit it as shown in Fig 3. These two ways are explained below

- a. First way, As shown in Fig 4 User can post the problem using camera by taking image of the location and upload it to through this application. The uploaded image will be stored in the database according to user's location i.e. latitude, longitude, date, time, and the type of stress they want to report.

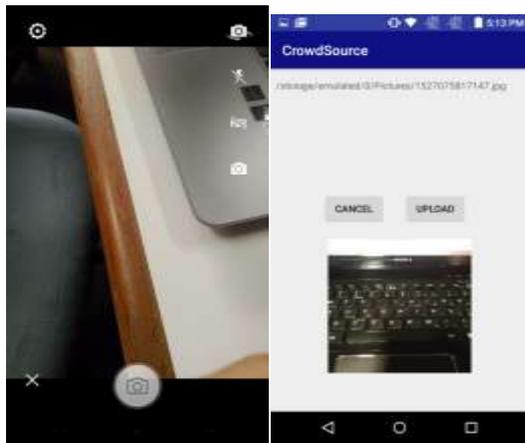


Fig 4: Capturing photo and upload.

- b. Second way, user can post the problem by choosing comment button as shown in below Fig 5.

They can comment the issue they are facing. If they don't have much time to take image they can just comment the issue and post it. The uploaded comment will be stored in the database according to the user location and stress.

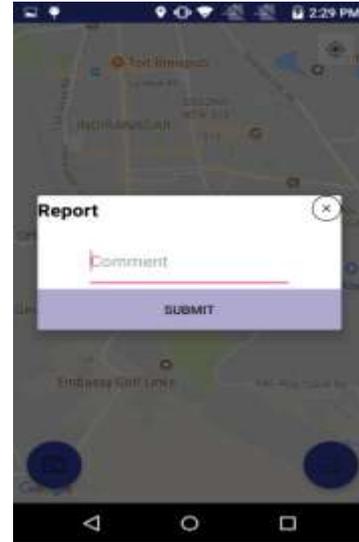


Fig 5: Commenting the issue.

At the point when user issues will be posted, those issues can be seen by the admin in the way of dashboards.

**Requirements**

- Android Environment.
- PHP.
- MYSQL.

**Steps**

- Make sure all the above mentioned requirements are installed.
- Create the app and connect it through PHP.
- Login to user created account.
- Posting the issue that users are facing through the app.

**V. CONCLUSION**

The android application explained in the paper to overcome the mundane problems that citizens are facing in their daily life, like garbage problem, potholes, violation, and environment.

- This is an useful application, because it generates report about a particular issue. Using this report anybody can report to the administrator of the city for redressal.
- It is felt that such application will definitely reduce the stress in the civilians which otherwise would have let to social unrest.

## REFERENCES

- [1]. Adriana Del Borghi, Michela Gallo, Carlo Strazza, Fabio Magrassi, Marco Castagna Waste management in Smart Cities: the application of circular economy in Genoa (Italy) ImpresaProgetto - Electronic Journal of Management, n. 4, 2014
- [2]. R. Szabó et al. • Framework for Smart City Applications Based on Participatory SensingCogInfoCom 2013 ,4th IEEE International Conference on Cognitive Infocommunication, December 2–5, 2013 , Budapest, Hungary
- [3]. Ka'rólyFarkas, Ga'borFeh'ér, Andr'asBencz'ur, and CsabaSidl'o "Crowdsending Based Public Transport Information Service in Smart Cities" IEEE Communications Magazine ,pp 158-165August 2015.
- [4]. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-4/W1, 29th Urban Data Management Symposium, 29 – 31 May, 2013, London, United Kingdom.