

Summary

Crowdsourcing of social cleanliness awareness using twitter and google maps

Objectives

The basic objective is to crowdsource and create an awareness campaign on clean and hygienic environment using popular social media platforms.

Description

As a responsible citizen whenever you encounter an unhygienic area, using twitter as the media platform, we spread awareness to the common man and local authorities and even use this data to analyze further to prevent epidemics like dengue and malaria.

Proposed solution

A user having a valid twitter account should be able to tweet using hash-tag e.g. ... # cleanindia passing additional details either from mobile or web.

The additional details are area details and dirtiness aspects ranging from 1-10 (10 being worst). If location cannot be auto detected, user would need to specify the city and location details.

For more details, user can also attach photos and videos along with the hashtag.

The Hashtag format will be validated for correctness. For ex -If geo map is unable to find the location or the dirtiness meter is out of bounds a notification will be sent back to the used with the error details (Fig 2)

Sample tweet Syntax

#swachdesh dirty-meter(1-10) city locality-details

swachdesh india 1 bengaluru BTM layout

swachdesh 5 bengaluru BTM layout 2nd stage

swachdesh India 1 Chennai Egmore Spencer Plaza



Fig 1 Tweet Example

Notifications

All / People you follow



Fig 2: Error Notification

This tweeted data is collected and stored in to relational DB and time series db opentsdb. It is exposed via a rest interface which google Maps API polls and queries to reconstructs a heat map. The intensity of the heat map is controlled based on the number of locations recognized as dirty. The images and videos are also plotted on the map based on the location details stored.

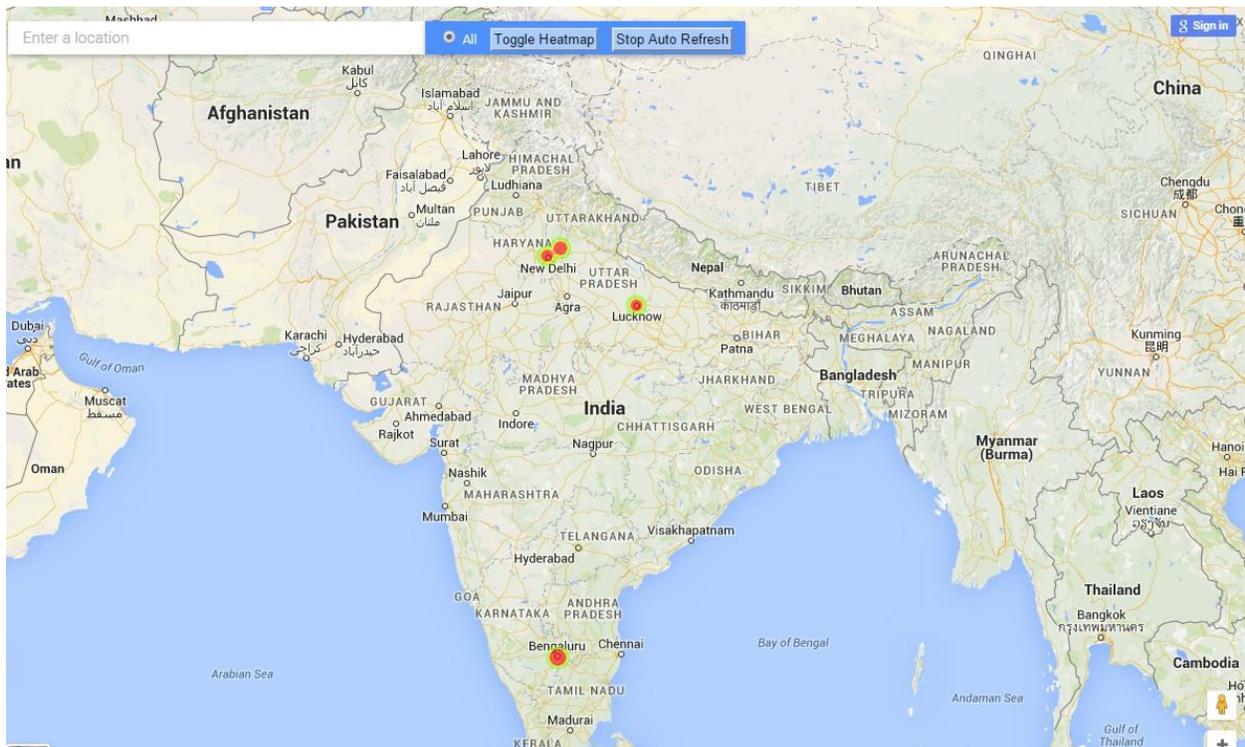


Fig 3: Google Maps -Heat map

Benefits

This data can be used to create a general awareness on how clean the city / area or locality needs to be

with the local civic body.

Some Business aspects where we can be further integrated are:

- 1) With dirtiness meter consistently rising we would be able to do an analysis of the location and check why it's consistently on the rise. Using this data we could arrange campaigning for cleanup with the local authority.
- 2) Integrate with the civic body cleaning system so that whenever we see a raise in dirtiness meter, we could alert the local authority with the details.
- 3) Alert the local health team to check for the regions which are more epidemic prone, so that they are aware of the situation and can take control, if emergency arise.
- 4) Aggregate the time series data and send detailed periodical information on the overall health of the locality
- 5) Analyze further what type of wastages are getting generated more on each locality.(ex hazardous chemical waste , Medical waste etc..)