

Automated Complaint Registration Systems

A part of Government Enhanced Administrative Resource (GEAR) Systems.

GEAR

Source Code: <https://github.com/gearsystems>

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Abstract

We complain & we all complain a lot. About the bad roads with potholes, garbage, flowing sewage, improper drains; about broken benches in public areas, improper and broken sign boards. Along with these regular problems there are also problems like improperly connected wires at transformers, dangerously low lying cables. Broken taps, benches in government schools and areas which are sometimes poorly maintained.

These problems are sometimes taken up by the community members in the locality but many a times, people don't want to take these problems to higher authorities because of constraints of one's own personal time and the hassle of dealing with the officials whenever they call and answering to them.

This problem is a major reason why most of the maintenance incidents across the country go unresolved thus causing inconvenience to the residents in that area and those stakeholders affected due to the particular problem.

Problem To be Tackled and proposed solution

Social media is an amazing resource for easily reaching out as well as gathering data about a large number of people, Public resources like twitter, reddit etc., makes it easy for people to share their experiences. The main aim here would be to use the twitter scraped data from [loklak](#) services and integrate it with Twitter Authentication so that the users information can directly be read. This tweets and image information that is parsed has to be run through a language processor to figure out what kind of a sentiment the tweet has and to classify it as a complaint or not. If it's a complaint, A bot should reply to the user and ask him/her for further details in a specific format so that the complaint can be registered.

The bot that has to be built is an AI program that is able to take in natural language and process that in real time to make a logical complaint tracker systems with ease that anybody can register complaints from anywhere.

Technicalities

1. Twitter authentication and application services
 - Replies to the user about successful complaint registration.
2. Similar with Facebook authentication and application services
 - All posts made on the page should be tracked and if in a specific format, parsed and the result of the complaint registration posted as a complaint.
3. Discussions about a possible short code format similar to how SMS uses "HELLO A/B/C to 1234567890", We need to have something similar to this but for Twitter, the layout being a 2 way communication to register a complaint
 - **Communication example**
 - i. **@gearsystems Broken road at #Warangal near #NITWarangal [Optional](latitude, longitude)**
 - Data that we have which can be stored
 - a. Username
 - b. Fullname
 - c. Date and time
4. Place validation URL Response:
 - [http://loklak.org/api/geocode.json?data={%22places%22:\[%22Warangal%22,%22Hyderad%22\]}](http://loklak.org/api/geocode.json?data={%22places%22:[%22Warangal%22,%22Hyderad%22]})

End Users

Literally everyone with a facebook or a twitter account who can just post a well framed english sentence and follow instructions on how to post a complaint in a specific format.

Devices

Web platform, REST API Creations

Platforms and Technologies to be used

Python Django, REST, JavaScript, CSS, HTML, Java
System setup tools and Shell scripts

Database platforms

MySQL / MariaDB, PostGRESql

Authentication techniques

Twitter Authentication OAuth1

- <https://dev.twitter.com/overview/api/twitter-libraries>

Facebook Authentication OAuth2