SURAKSHA

09-06-2020

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PROJECT DOCUMENTATION

Project repository: https://github.com/errpv78/Suraksha

Overview

A web app for women's safety and empowerment. It features women related news articles to highlight current women issues, and crimes against women, has an emergency button for connecting women in need to their trusted ones, various maps features, and awareness about women's rights and laws.

Run Instructions

After cloning repository open a terminal from the repository folder, install all the requirements from requirements.txt by running a command in terminal/cmd:

For Linux/macOS users:

1. Check for virtual env: python3 -m pip install virtualenv
2. Create virtual env with name Suraksha: python3 -m venv Suraksha
3. Activate virtual env: source Suraksha/bin/activate
4. Install required dependencies: pip install -r requirements.txt
5. Run the web app server: ./run.sh

For Windows users:

1. Check for virtual env: py -m pip install --user virtualenv
2. Create virtual env with name Suraksha: py -m venv Suraksha
3. Activate virtual env: .\suraksha\Scripts\activate
4. Install required dependencies: pip install -r requirements.txt
5. Change directory to the website: cd website
6. Run Project Server: python manage.py runserver

Project APIs

1) Twilio for messaging service:

The Twilio messaging service has been used in the project. Due to the trial version messages can be sent only to the verified numbers (currently of Parikh Goyal and Ankit Goyal). Upon licking the emergency button the API is used to send an emergency message to the above mentioned verified mobile numbers.

2) Mapmyindia for maps:

The project used Mapmyindia APIs for displaying maps, geocoding, reverse geocoding, and embedding of Corona updates. The routing, navigating, and safe route could not be integrated with the current version of the project as mapmyindia was using PHP scripts at the backend for the above-mentioned tasks, which was not possible to run on a Django server.

3) Geolocation:

The find me feature of the project uses geolocation API for finding current location coordinates through the IP address. And then the coordinates are reverse geocoded to get the address information, which is then displayed on mapmyindia maps.

Project Structure

I.   website

The name of the Django project

II. website/main_app

The main App of the project.

III. website/main_app/templates/main_app

The directory containing all the HTML templates of the project.

IV. website/main_app/static

The directory for all the images used in the project.

V.   website/main_app/forms.py

The file with the emergency contact registration form.

VI.   website/main_app/mail.py

The file with a send_mail function to send mail.

VII.   website/main_app/Scraper.py

The file to scrape the news content.

VIII.   website/newsdb.db

The database to store news data.

IX.   website/main_app/SmsSender.py

The file with a send message function to send a message using Twilio API.

X.   Html templates

city_map.html - for find in city page.

common.html - file with navbar and footer common to all pages.

corona_updates.html - file with the corona updates page.

create_contact.html - create emergency contact page.

delete_contact.html - delete emergency contact page.

developers.html - developers page.

emergency.html - emergency page after emergency button is pressed.

emergency_contacts.html - display emergency contacts page.

find_me.html - find me page to display current location.

helpline _numbers.html - page with state-wise helpline numbers listed.

home.html - homepage of the project.

login.html - login page.

news.html - quick glance to see women related news.

register.html - register page.

women_laws.html - women laws page.

women_rights.html - women rights page.

Project Functions:

```
1) def send_mail(dest, message): Takes destination mail and
   message as a parameter to send the given message to the
   given destination via an email.


2) def news_fetch(): Scrapes women related news from
   https://economictimes.indiatimes.com/topic/women/news
   and stores in newsdb.db database.


3) def write_news(): Writes the Html page news.html and
   inserts news from news.db in form of cards to that page.


4) def sendSms(phone_number, message): sends a message as
   specified by parameter to phone_number (only if that
   phone number is verified).


5) function getLocation(): javascript function to get
   current location using ip address.
```

Project Scope:

The project can be extended in various ways, and the current project is created with the best efforts of the team with given time and resources. Points for further development:

1) Using better maps APIs for including, routing, navigation, and geolocation functions along with sending current location information in the emergency message.
2) Using various other news sites to add more news content using machine learning to classify women related news to further categories.
3) Using paid messaging services for sending messages to unverified numbers also.
4) Adding other women related content to the website with a content update feature to bring new content.
5) Collaboration feature to involve more people with the project to try to develop a secure women environment in society.
6) Adding NGOs with the project.

****THANK YOU****