

Weather Crisis

CMPSC 463 (section 1)

[GitHub](#)

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Project Description

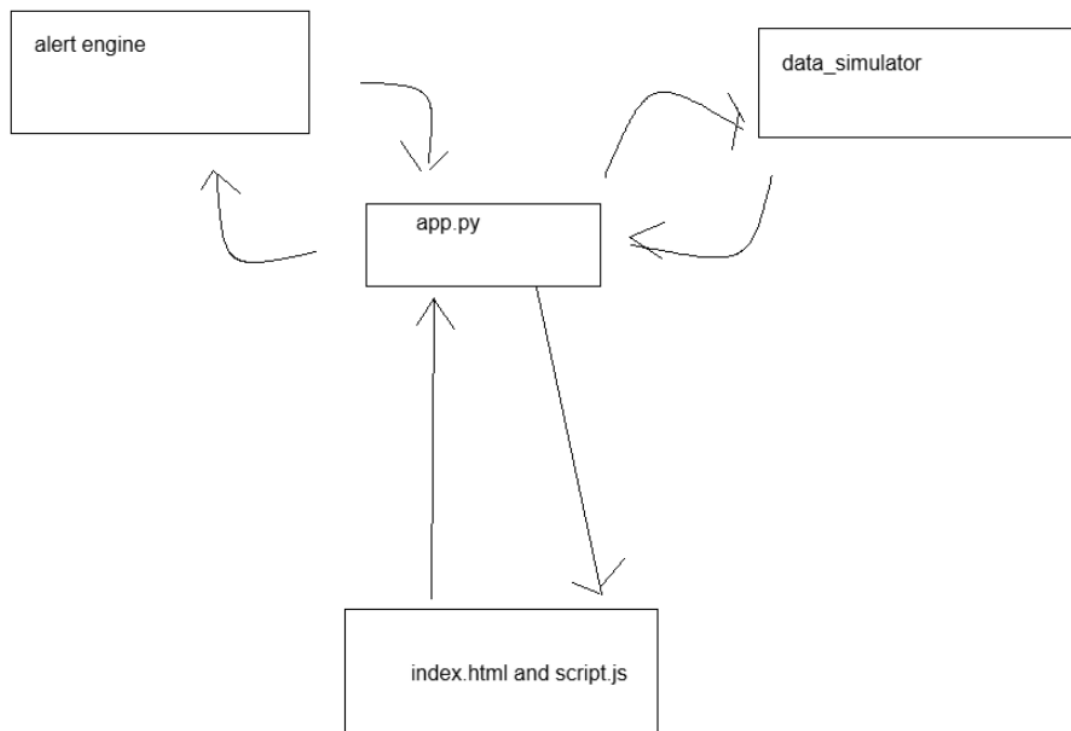
Weather web application that receives data and info from the publicly and freely available government web API for weather. Displays received information to the user and provides a warning label based on the severity of the weather.

Significance

Could be helpful to show weather warnings as soon as the government catches wind of it, but unfortunately may fall short of local weather stations and forecasts. Unfortunately, we don't have the resources to be able to predict the weather or the datasets to train a model to. Nor access to a model to train. So this is more or less a best attempt to create a springboard for these ideas.

Code Structure

The website runs a java script that receives json from app.py. The app.py program receives data from the data_simulator python program that receives data and parses it from the public weather API. Currently, the weather API is configured for use in Pennsylvania. Then it judges the data using the alert_engine.py program to determine the severity. Then the javascript on the website displays said information for the user.



Description of Algorithms

Data_simulator uses python libraries in order to receive and parse json. Alert Engine uses comparative algorithms in order to create appropriate warnings based off a judged severity of the situation and numbers given to it for the weather situation that may be encountered.

Verification of Algorithms

See the demonstration video, the data is properly received and given to the user. We believe the data is accurate because it comes from the government.

Functions

All functions are used to grab and send and communicate data. These were explained in the code structure.

Results and Analysis

Weather Crisis Early Warning System

ALERT LEVEL: GREEN

Stable conditions

Current Weather Data

Temperature: 21 °C
Rainfall: 0 mm
Wind Speed: 0 km/h
Humidity: 65%
[Refresh Data](#)

It works as best as it can

Conclusion

Lots of issues in regards to getting this working and having to make a front end and a back end. Issues with actually running and locally hosting for the web interface. Applications of course learning we implemented basic python and used libraries. It was difficult trying to find exactly what to do for this project with such a vague description and no resources given.