Understand which districts in Mexico city are most affected by natural disasters?

Introduction

Mexico City is one of cities that has suffered the most from meteorological and natural disasters in Mexico.The reason why Mexico city suffers a lot of disasters is because the city location above the interaction of the two tectonic plates known as North america plate and Cocos plate.When this to plate interact they create meteorological disasters.Identifying the districts that get more affected form this disasters can help focus on the most important district and help prevent decrease future meteorological damages.
https://www.ngenespanol.com/naturaleza/por-que-hay-tantos-sismos-en-mexico/

Methodology

Measure natural disasters
Extract Data: Gobierno de la ciudad méxico:Desarrollo Urbano, Vivienda y Territorio - Categorías

- Import csv files to notebook:We imported the files from the url that contains all the data of the natural disasters in mexico city and it districts, the goal it's to extract the location to plot the mexico city map and its diferentes disaster in all the districts in mexico city and mature the amount of damage caused by each disaster.

Build connection: We decided to use mongoDb to build connections because we don't nit a variety of tables, only a connection to extract specific information.

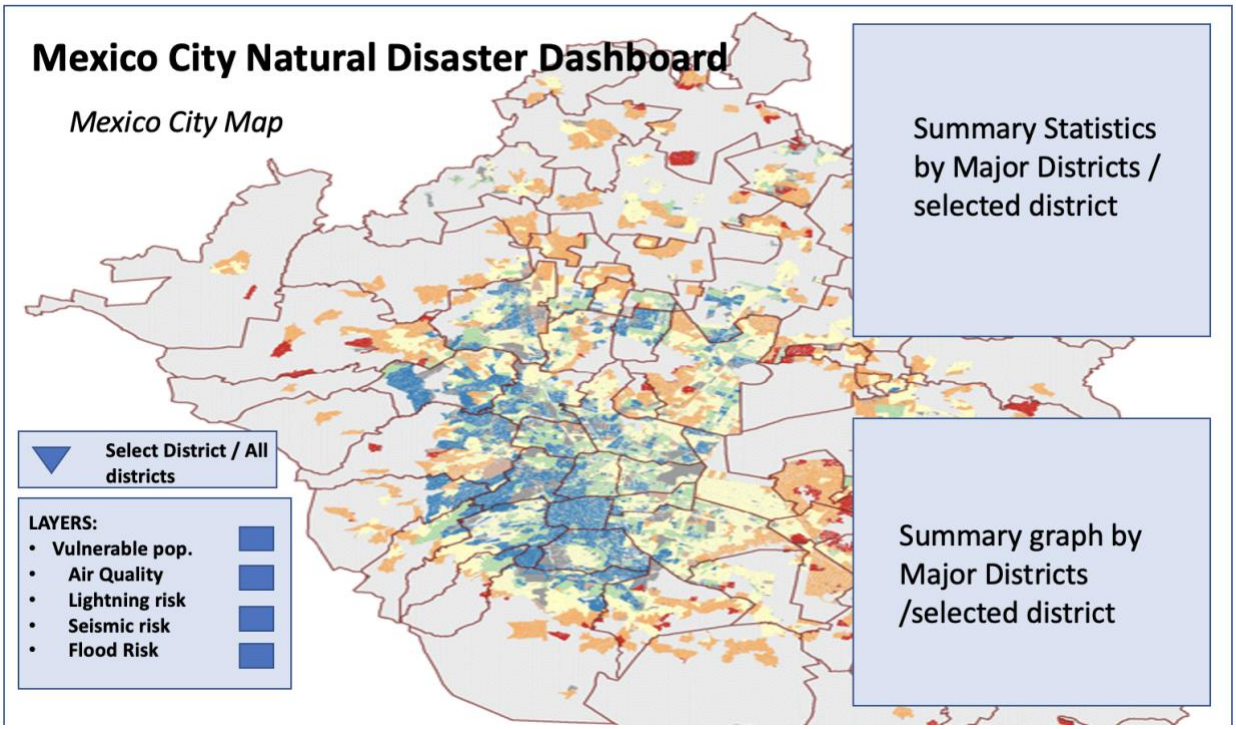
- Build connection in python mongo:Merge all the csv files to use only one database connection, create a for loop to filter all the data, finally build two connections to activate mongos one with the districts information and the other one with agbs data.

- App:Build a flask with the mongo connection build to app one for the districts and the other one agbs.Converted the _ids into string this step helps visually the data.

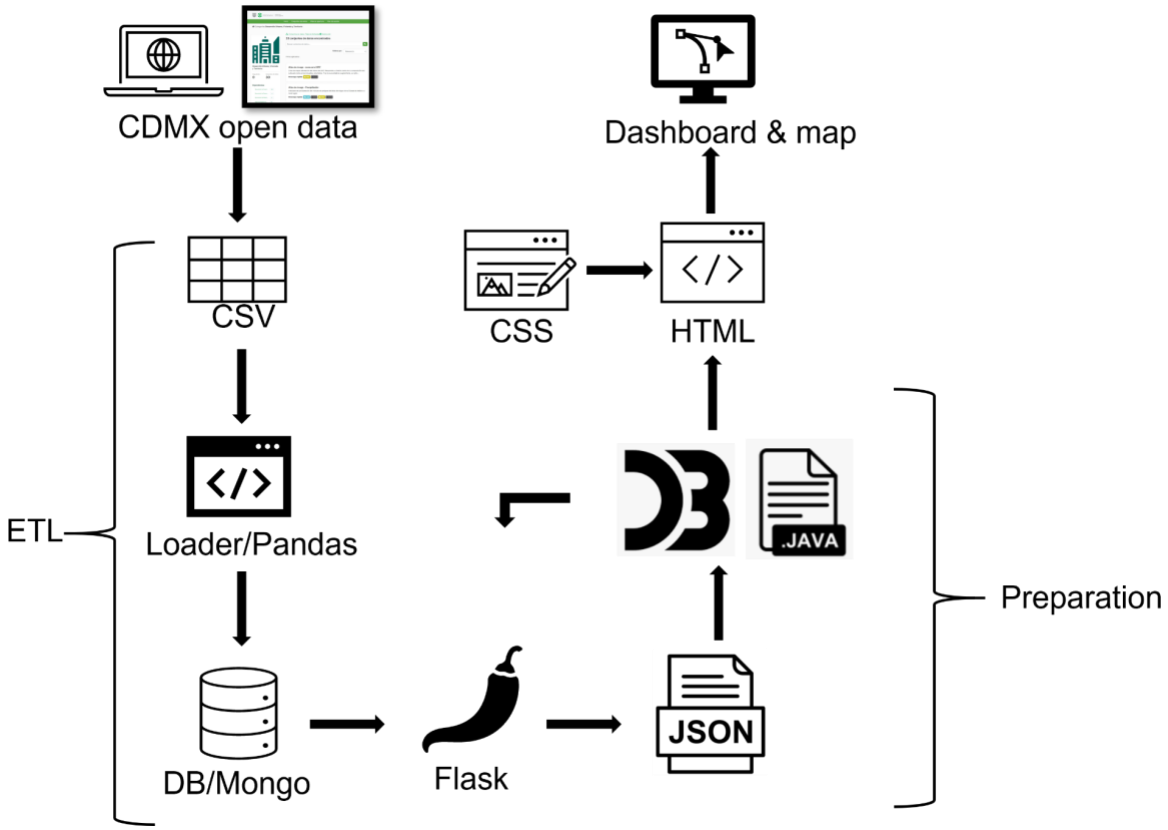
Interpretation of the data:Publish the data in different programs, html is used to create the indeed and website, java script is use to build the map and create graphs to measure the different districts.

- Index: Build a html web page, establish the place where all information will go, there are two bottoms at the top, one map and two visual graphs.

- Json Map:We build a map with coordinates of the file in the web page of the government of Mexico city. This map measures the different natural disasters.**Analyzing geological and meteorological conditions i**n the city, which we use to develop an interactive dashboard.



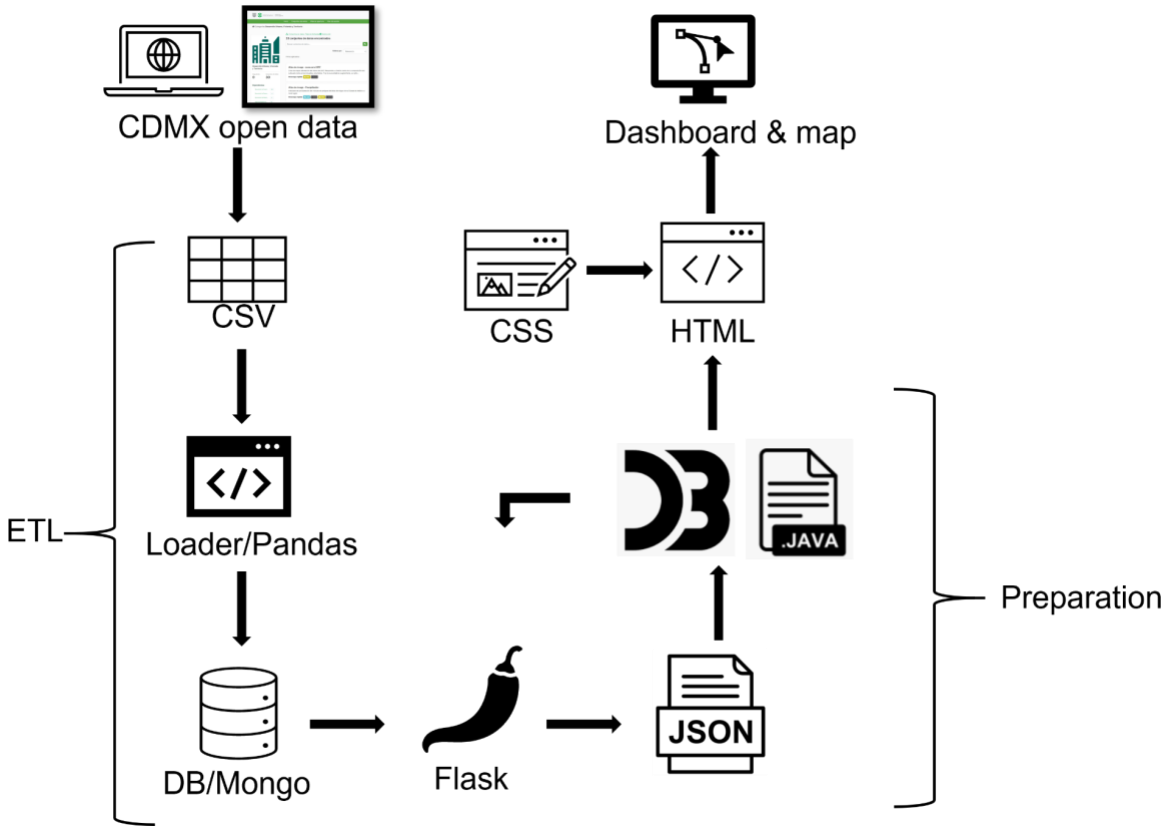
- Json bar graph: We create two bar charts one measures all districts and Mexico city and how vulnerable they are and the other bar charts measures how each disaster affects each district.



Conclusion

The focus of the project is to detect which districts is the most affected and with which disaster in mexico city.We use database from a government of mexico city, then data of the disaster we merge at in python and create flask to connect the data.The app create in class were use with json to create the graphs and map use in the html web page.

The district that was most affected of all was Miguel Hidalgo and the disaster that was most affected was the lightning storm.


CDMX open data
Dashboard & map
CSV
CSS
HTML
ETL
Loader/Pandas
.JAVA
Preparation
DB/Mongo
Flask
JSON