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SI 507 Final Project Documentation

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**SI 507 Final Project: Wayne County COVID-19 Data**

**Link to GitHub**

<https://github.com/amb-umich/amb_final_project.git>

**Overview Summary**

The Wayne County COVID-19 Data Graph Generator is a program that allows a user to get the most up-to-date Wayne County COVID-19 data from the State of Michigan website. The user is able to select the type of data to display. These options include:

* Graph showing COVID-19 cumulative confirmed deaths
* Graph showing COVID-19 cumulative confirmed cases
* Graph showing COVID-19 daily confirmed cases
* Graph showing COVID-19 daily probable cases
* Graph showing COVID-19 daily confirmed deaths
* Graph showing COVID-19 daily probable deaths

Here is a quick overview of the method this program works. It begins by using BeautifulSoup to crawl and scrape the [www.michigan.gov](http://www.michigan.gov) website for up-to-date data. Once this data is located, it is requested and saved on the local drive of the user as a xlsx file. This gives the user the option to always keep the data files for any other projects. Next, this xlsx data is converted into a database to be used through SQLite. This allowed for easy filtering of the data. After the data is filtered, the graphs are generated using poltly.

Since we are currently living through the COVID-19 pandemic crisis, data and information is continuously being updated and uploaded onto the site. Ultimately, this program will give the user to ability to quickly generate true to date graphs depicting the current state of COVID-19 in Wayne County. I work for the Wayne County Health Department and now I will be able to use this program at work to generate COVID-19 informatics in seconds. Before, it took me a while to generate the graphs because I had to clean the data and manual do everything. This program streamlines the process much, much quicker. Thank you teaching how to do all of this!

**Data Sources**

* [www.michigan.gov](http://www.michigan.gov)
* Wayne County cumulative confirmed deaths
* Wayne County cumulative confirmed cases
* Wayne County Daily confirmed and probable cases on day of testing
* Wayne County Daily confirmed and probable deaths

**Video link**

<https://github.com/amb-umich/amb_final_project/blob/main/AMB_SI507_Final_Project_F2020.mov?raw=true>

**Packages Required**

from bs4 import BeautifulSoup

import requests

import pandas as pd

from urllib.request import urlretrieve as retrieve

import plotly.graph\_objects as go

import sqlite3

import openpyxl

**Screenshots:**

Table

Description automatically generated

Chart, histogram

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