

HealthAccess User manual

Please read this manual to deploy the app's program and get the desired results

About the app

HealthAccess provides you relevant health information across 3 in-app choices. This app is intended to consolidate the large amount of healthcare information available on the internet, curate it and provide it to the user based on the need.

How to operate

Step 1 (setup)

- Make sure you have the following 6 helper files in your directory:
 - travel_time_finder.py
 - hospital_website_finder_2.py
 - appt_page_link.py
 - hospital_list.py
 - aqi_info.py
 - average_sleep.py
- If you do not have any of the following libraries, please pip install <library> before running the main program
 - requests, json, re, pandas, bs4, matplotlib, seaborn, datetime
- Make sure you have the following two csv files in your directory:
 - sleep_hours.csv
 - pennsylvania_PM2.5_historical_data.csv

Step 2 (running the app)

- Run the program **HealthAccess.py**
- Enter your street address

Step 3 (in-app choices)

- The app would ask you to choose one of the following options:
 - Emergency
 - Non-emergency
 - Know your wellbeing
- If you have an **emergency requirement** and just want to find your nearest healthcare facilities, their telephone number and the driving time to each, choose '1' (emergency)
 - You will get a csv (**emergency_output.csv**) in your directory that provides you a list of 10 closest hospitals along with the above mentioned information
- If you have a **non-emergency requirement** where you want to find a set of closest hospitals of a particular type, choose '2' (non-emergency)
 - The app would show you a list of keywords. Choose the one that best describes your requirement

- Once you have made that choice, you will get a csv (**non_emergency_output.csv**) containing 10 nearest healthcare providers, their website, their telephone numbers, driving time, url of their appointment page (if it exists), whether it is open now, whether the facility is operational or closed and its google ratings
- If you want information on your wellbeing in terms of the quality of air you breathe or the hours you sleep relative to an average American, choose '3' (Know your well-being)
 - The app would show you two options - 'AQI information' and 'Your sleep hours comparison'
 - **AQI information:**
 - This option shows you current values of three air quality indices (AQI) in Pittsburgh:
 - Particulate Matter (PM_{2.5}) AQI
 - Ozone (O₃) AQI
 - Nitrogen Dioxide (NO₂) AQI
 - It displays the category in which the maximum of the three AQIs lies and issues a health warning if AQI levels worsen (as per World Health Organization standards).
 - It graphs the monthly averages of the three AQIs (based on last six months' data), the current maximum AQI and saves the graph (**aqi.pdf**)
 - **Sleep hours comparison**
 - This option will ask you to enter your age, gender, income and average daily sleep hours
 - It will show a regression line plotting average sleep hours for a range of income levels and show you where you lie (for similar age and gender data points) (**sleep_hours_comparison.pdf**)