Explore Pittsburgh App: Documentation

Team NUMPY-rates

Abstract: *Explore Pittsburgh* is an application that allows users to explore Pittsburgh via three major categories, namely restaurants, events and art exhibitions. The application extracts Pittsburgh restaurant data using a Yelp API, extracts art exhibition data from a downloadable CSV file, and web-scrapes event data from Pittsburgh city websites. The highlight of the application is its user-friendly output. Using packages such as GeoPandas and Plotly, results are displayed on interactive maps and tables which visually guide users to choose an activity of their choice.

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App Concept:

The user is a resident of Pittsburgh looking to identify entertainment, attractions and food options in the city. He can get information on local events by its genre, schedule, location and price. The data can provide individual lists of events as per his specifications and search conditions.

Inputs: Set search requirement about the activity he is interested in

Output: Gives him available activity of interest per his search criteria

User Instructions:

Download Libraries:

1. The following libraries are required to run the application. Please install if not already done.
    a. NumPy
    b. Pandas
    c. Requests
    d. Beautiful Soup
    e. GeoPandas
    f. Plotly
    g. Shapely

Download CSV data

1. One data source is a CSV file extracted from a publicly available online data center. The other data sources are extracted within the application itself. Please download the CSV and keep it in the directory in which you are running the application.
    a. CSV location: https://data.wprdc.org/dataset/city-of-pittsburgh-public-art/resource/00d74e83-8a23-486e-841b-286e1332a151?view_id=31df2769-2979-4677-8c1a-7c0f6da7aac5
        i. Navigate to the *Data Table* tab → click *Download* → click *CSV* → Move file from your *Downloads* folder to your working directory → Rename to *art_data.csv*

Run application: Run *SourceCode.py*

1. App asks the user which activity they are interested in. The user chooses one by entering **1** for Restaurants, **2** for Art Exhibitions and **3** for Events
2. IF the user chooses 1 (for restaurants):
    a. Input: The app asks the user for search criteria on
        i. Price Range
        ii. Rating
        iii. Review Count
    b. Output: Shows an interactive map in a new browser with locations of restaurants along with other details such as:
        i. Cuisine Type
        ii. Price Range
        iii. Number of Reviews
        iv. Rating
3. IF the user chooses 2 (for art exhibition):
    a. Input: The app asks the user for search criteria on (one of the following)
        i. Name of the Exhibition
        ii. Artist Name

        iii. Neighborhood (where the exhibition is located)
        iv. Or, user can view all art installations
    b. Output: Shows an interactive map in a new browser with locations of art exhibitions along with other details such as:
        i. Name of the Exhibition
        ii. Artist Name
        iii. Neighborhood (where the exhibition is located)
4. IF the user chooses 3 (for events):
    a. Input: the app asks the user for search criteria on
        i. Date of event (YYYY-MM-DD)
    b. Output: Locations of events are displayed in a formatted table in a new browser with relevant event information
        i. Event Name
        ii. Category
        iii. Event Start Date
        iv. Event End Date
        v. Event Time
5. The app will continue to prompt the user to search for attractions until the user selects option **0**, which will terminate the request for user input.