Explore Pittsburgh App

Team NUMPY-rates

Team Members

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App Concept

- The user is a resident of Pittsburgh looking to identify entertainment, attractions, art installations and food options in the city. They can get information on local events by its schedule, location, date or price. The results can be displayed in a map or table (subject to activity) as per their search specifications.

Objective:

- Inputs: Set search requirement about the activity they are interested in
- Output: Gives them the list of places/activities as per their search requirement on an interactive map

App User Manual

The App asks the user which activity they would be interested in:

I. Restaurants
II. Art Exhibitions
III. Events

The user chooses one….

I) App User Manual (if Restaurant chosen)

Input: The App asks the user to specify the following:

- Price Range
- Minimum preferred number of reviews
- Minimum preferred rating

Output: Restaurants and their location are displayed on an interactive map with relevant restaurant information:

- Name of Restaurant
- Address
- Cuisine Type
- Rating
- Number of Reviews
- Price Range

II)App User Manual (if Art Exhibition chosen)

Input: The App asks the user which attribute they want to search from the database:

- Neighbourhood (location of the exhibition)
- Exhibition Name
- Artist Name

Output: Locations of art exhibitions are displayed on an interactive map with relevant exhibition information:

- Art Title
- Artist Name
- Neighbourhood

III) App User Manual (if Event chosen)

Input: The App asks the user which attribute they want to search from a database:

- Date

Output: Locations of events are displayed in a formatted table with relevant event information:

- EventName
- Category
- startDate
- endDate
- Time

Data Sources – Method of extraction

1. Restaurant Data:
   - Source: Yelp Developers
   - Website: https://api.yelp.com/v3/businesses/search
   - Extraction Method : Yelp API to get restaurant information
   - # of observations: 46

Data Sources – Method of extraction

2. Public Art Fixtures:
   - Source: Western Pennsylvania Data Center
   - Extraction Method: CSV
   - # of observations: 197

Data Sources – Method of extraction

3. Event:
    - Source: Downtown Pittsburgh
    - Website: https://downtownpittsburgh.com/events/
    - Extraction Method: Web Scraping
    - # of observations: 148

DEMO

~SWITCHING TO SPYDER~

Libraries and Features Used

- GeoPandas
  - Used to prepare geographic data for mapping
- Plotly: Scatter_Mapbox, Graph Objects
  - Used to generate interactive maps and tables for output
- Shapely, Geometry
  - Used to transform geographic coordinates into different coordinate projection systems
- Pandas
  - Used for data cleaning, wrangling, and management
- Requests
  - Used for data extraction via web-scraping and API
- BeautifulSoup
  - Used to parse HTML code during web-scraping
- NumPy
  - Used for data cleaning, wrangling, and management

Limitations and Next Steps

- Explore different API endpoints to extract more restaurant data
- Explore other event data sources to extract location information
- Expand to other attractions in Pittsburgh such as museums, concerts/shows, parks, and hiking trails

Thank you