Clinic Go Where: KMeans-Based Clinic Recommendation System

Document: Application Setup Manual

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Disclaimer: The project is a school project. The author does not own the data used in this project, please do not use the data for commercial projects.

1. Prepare Python Environment

1.1. You are recommended to install anaconda from https://www.anaconda.com/
1.2. From window search, launch Anaconda Prompt
1.3. Create a new virtual environment for the project from anaconda prompt by typing "conda create --name rpa"
1.4. Activate the environment by typing "rpa"
1.5. Install the requirements by typing "pip install -r requirements.txt"
1.6. From window search, launch Anaconda Navigator
1.7. Select "RPA" environment

2. Set Up Google API

2.1. Log in google cloud platform (GCP) https://console.cloud.google.com/
2.2. Set up google account based on GCP instructions
2.3. From search bar, find "Geolocation API" and enable it
2.4. From search bar, find "Distance Matrix API" and enable it
2.5. From search bar, find "Direction API" and enable it
2.6. From GCP home, click "API and Services" (left hand navigation bar)
2.7. Click "Credentials"
2.8. Click "Create Credentials"
2.9. GCP will generate a key. Please replace "Your Google API" with the key in these files: scripts\ Model.ipynb and app\app.py

3. Launch Web App

3.1. Launch Spyder(recommended)/ Pycharm/any other editor. Make sure the environment is properly configured & loaded
3.2. Run app/app.py
3.3. Enter a Singapore postal code
3.4. The web app will return you a list of nearby clinics and their details

4. Download Clinics Data

4.1. You can download clinics data from scripts\ ExtractData _HCI.ipynb
4.2. You can download phpc clincis data from scripts\ExtractData_PHPC.ipynb
4.3. You can download Singapore geolocation from scripts\ Extract_PostalCodes.ipynb
4.4. Or you can use the pre-downloaded data under scripts\data folder to run the app. Please remember to unzip address_list.7z (I was not unable to upload the original file due to size issue.)

5. Process Data

5.1. Please run scripts\ ProcessData.ipynb to clean the data downloaded
5.2. Please run scripts\ Model.ipynb to generate the clustering models
5.3. Or you can use pre-processed data under app\data folder to run the webapp

6. Special Notes

6.1. No DB is used in this project. Data are stored in Json/CSV format.
6.2. Please feel free to contact me at e0384977@u.nus.edu if more clarification is needed.