Applied Data Science Capstone project - Dubai Neighborhood Analysis

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II: DATA SOURCES

Based on our business problem statement we will need following parameters data:

1. **Tourists footfall**: What are top destinations of tourists in Dubai city with locations
2. **Population density**: Dubai neighborhoods and population counts / Densities
3. **Number of Venues** in the neighborhood to understand the commercial traffic
4. **Existing restaurants** and their types around each neighborhood
5. **Availability competition** (existing Japanese restaurants) in the neighborhoods

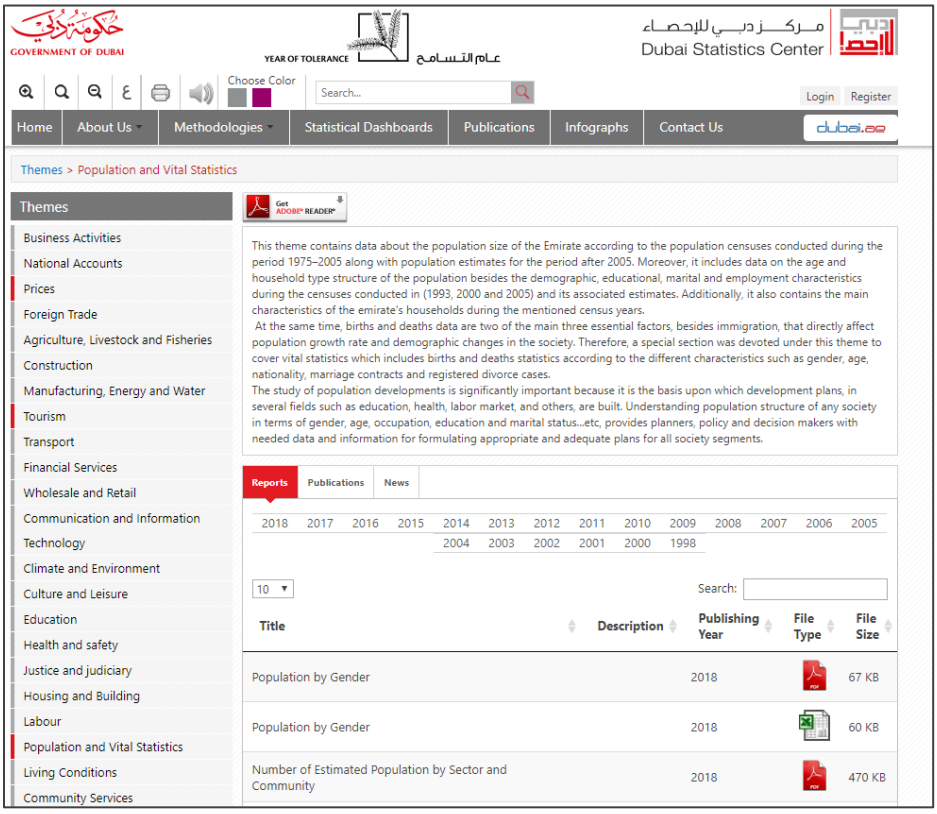
We can collect the first two datasets from the following sources:

Top Tourist Destinations in Dubai City:

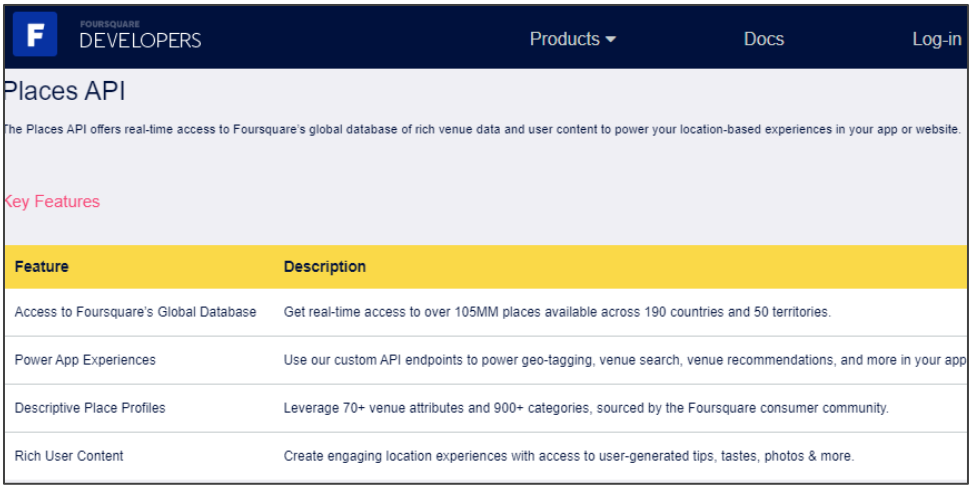
- https://www.globalmediainsight.com/blog/dubai-tourism-statistics/
- https://www.planetware.com/tourist-attractions-/dubai-uae-dub-dubai.htm

Number of Estimated Population Dubai City.

- https://www.dsc.gov.ae/en-us/Themes/Pages/Population-and-Vital-Statistics.aspx?Theme=42



Remaining data sets from **3 to 5** can be collected / extracted and generated from **Foursquare API.**



Data Exploration and Analysis:

Above datasets will be collected, cleaned and transformed into suitable format for further data exploration analysis. The sites with high tourist's footfall (top tourist destinations) will be mapped by collecting their latitude and longitude values. Once we have the locations of these sites, we will spatially check them against **population density** and **number of venues** data to understand population density and commercial activity traffic around each site.

If any destinations are falling in very low population density with very low commercial activity traffic (venue counts), then those destinations will be omitted from further analysis as they do not represent prospective sites for new restaurant. The final shortlisted sites will be used in machine learning algorithms such as K-means clustering to understand the overall restaurants distribution and in particular the Japanese restaurants.

The top tourist's destination sites with high population density, high commercial activity traffic and with low Japanese restaurants distributions will be selected as best location to open a Japanese restaurant in Dubai.