The Battle of The Neighborhoods
Week 4 |Part 1|: Applied Data Science Capstone
Hyderabad City Locality Recommendation System
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Hyderabad
(Source: https://hyderabad.telangana.gov.in/about-district/):

Hyderabad is the capital of India's most tech-savvy state, Telangana. This city is also known as the "City of Pearls" due to its history of being a global centre of trade in rare diamonds, emeralds and most importantly, fresh water pearls. Hyderabad was founded in 1951 and was planned as a grid with the Charminar at the centre. It has grown beyond the confines of the original walled city, to include a new town, north of the Musi river, the Military Cantonment at Secunderabad and the famous high-tech estate nicknamed, "Cyberabad".

Hyderabad district is a city-district in the state of Telangana which includes a part of the metropolitan capital city area of Hyderabad. It is the smallest in terms of area among all the districts in the state (217sq.km) but has the highest human density. According to the 2011 census, the population of this district was 3,943,323.

Greater Hyderabad Municipal Corporation (GHMC) and the Demography of Hyderabad:
(Source: https://worldpopulationreview.com/world-cities/hyderabad-population/)

The Greater Hyderabad Municipal Corporation (GHMC) is the civic body that oversees Hyderabad. It was created in 2007 to oversee the "18 circles" of the city. This increased the area of Hyderabad to approx. 650 sq.km and the population grew by 87%. The GHMC has a population of approx. 10 million which makes it the 6th most populous urban agglomeration in India. It is the local government for the cities of Hyderabad and Secunderabad. At present the GHMC is spread across 4 districs – Hyderabad District, Medchal District, Ranga Reddy District and Sanga Reddy District.

Most of the Hyderabad population comprises Telugu and Urdu speaking people. The minority communities include Tamil, Marathi, Kannada, Marwari, Gujarati, Keralites, Punjabis and communities from Uttar Pradesh. The foreign population in Hyderabad comprises Hadhrami Arabs (of Yemeni descent), African Arabs, Armenians, Iranians, Pathans and Turkish people.

As per the 2011 census, 24% of Hyderabad residents, were migrants from other parts of India.

Understanding the population growth:

As Hyderabad is one of the fastest growing metropolitan areas in India, it faces issues in terms of employment, housing and essential services. There has been a 264% increase in Hyderabad's slum population bringing it up to 30% in 2014. This has been attributed to two factors:

- Inefficient Urban Planning
- Greater rural-to-urban migration

Problem Description:

The objective of this project is to analyse and select the best possible localities in the city of Hyderabad for a contract working executive to live in/relocate to.

A challenge faced by Sindhi working executives relocating to Hyderabad for 1-2 year projects from Mumbai, Ahmedabad and Pune living with family on rent in Hyderabad, is finding the right locality to live in based on the population density, the rental rates and the availability of specific conveniences in the locality. The committee members of the Sindhi Community Centre of Hyderabad approached me to find a solution for this problem.

Using Data Science methodology and ML techniques like clustering, the project aims to provide the solutions to the question:

If a Sindhi working executive is planning to relocate to Hyderabad, based on his specific requirements , in which locality would you recommend he shift to?

Target Audience:

While the project is designed to answer the question put forward by the Sindhi Community Centre, the target audience of this project could be any working executive in particular, either looking to shift to a rented house in a different locality in Hyderabad with family or looking to relocate to Hyderabad with family for a short period of up to 2 years.

In the case of this project, the additional parameter (of specific convenience) that will be factored in is that of the presence of vegetarian restaurants in the locality. This is being undertaken as most of the Sindhi working executives with families relocating to Hyderabad and approaching the Sindhi Community Centre for guidance, are vegetarian and are particular about relocating to areas where there is a reasonable presence of vegetarian restaurants.