The Battle of Neighbourhoods: IBM Data Science Capstone Project

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# Topic: Exploring the Food Culture in Melbourne using Foursquare API and K-Means Clustering

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## **Introduction** **1.1. Background**

Melbourne is known as the food capital of Australia. It is considered to be a multicultural melting pot as it is a home to more than 200 nationalities, hence similar number of cuisine inspirations. Quoting from an article on the food culture of Melbourne:

*“There is no authentic Melbourne dish or cuisine. Rather, the city's food options are limitless because it is a multicultural melting pot. Food is a portal into culture, and Melbourne's vibrant immigration history remains at the forefront of its culture partly because of its undeniably international cuisine.”*

### **1.2. Problem**

While on one hand having a plethora of food options is advantageous in an ethnically   
 diverse city, however on the other hand exploring a wide array of food places might be  
 equally time consuming for someone not so well verse with the city. Moreover, there is a

fierce competition among the eateries to attract the foodies in the city, and hence new   
 eateries keep popping on and off on Melbourne’s radar.

The aim of this project is to explore the food preferences/taste of various suburbs in   
 Melbourne by segmenting eateries in various suburbs based on the cuisines which they   
 offer. In this project, the Foursquare’s ‘Places API’ will be utilised to fetch venues in   
 Each sub-urban location and further ‘K-Means’ algorithm will be used to segment these   
 venues into clusters of similar cuisines. Moreover, a profile for each suburb location will   
 be prepared describing the most common type of eateries using Exploratory Data  
 Analysis (EDA), which would help to discover further about the culture and diversity of   
 the neighborhood.

### **1.3 Stakeholders**

### **Individuals**

### The results from this analysis will be useful in understanding the distribution of diverse food cultures in Melbourne, which might making it easier for individuals to choose or navigate to their desired food destinations.

### **Businesses**

* A high level understanding of the distribution of food culture of various suburbs can also be utilised by various business owners who might be planning to expand their ventures to other suburbs or open a new venture in any of the suburbs in Melbourne.

## **Data Acquisition and Preparation**

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