**Introduction**:

Pennsylvania is one of the most populous state of united states and the 9th most densely populated state of America. Undoubtedly, it is a most diverse state with over 13.5 million people from various ethnicity.

**Problem**

Food Diversity is an important part of an ethnically diverse metropolis. The idea of this project is to categorically segment the neighbourhood of Pennsylvania into major clusters and examine their cuisines. A desirable intention is to examine the neighbourhood cluster’s food habits and taste. Further examination might reveal if food has any relationship with the diversity of a neighbourhood. This project will help to understand the diversity of a neighbourhood by leveraging venue data from Foursquare’s ‘Places API’ and ‘k-means clustering' unsupervised machine learning algorithm. Exploratory Data Analysis (EDA) will help to discover further about the culture and diversity of the neighbourhood.

**Stakeholders**

This quantifiable analysis can be used to understand the distribution of Asian cuisines over different counties of Pennsylvania. Also, it can be utilized by a new food vendor who is willing to open his or her restaurant. Or by a government authority to examine and study their city’s culture diversity better.

**Methodology Highlights**

In this analysis, we shall take different counties in Pennsylvania and to categorically segment its neighbourhoods into major clusters and examine their Asian cuisines. The intention is to examine the neighbourhood cluster's

Import the Pennsylvania population and projection information map from <https://harrisburg.psu.edu/>

Import GEOJSON file for the different counties at Pennsylvania from <https://www.pasda.psu.edu/>

Mark those counties in the Pennsylvania map

Fetch the availabilities of different restaurants using foursquare API

Analyse different Asian cuisines available in the counties and derive the relationship with the population ethnicity.