**Capstone Project**  
Restaurant Location Determination

*Introduction/Business Problem*

A slew of recent studies have shown the health benefits of following a plant-based diet. Younger generations, specifically Millennials and Gen Z, are two of the largest population groups calling for availability in meat and dairy alternatives. The food industry is slowly incorporating more plant-based options on their menus to address the growing demand for these products. In larger cities, there is a market for complete plant-based restaurants, but at this point, this market is largely untapped.

According to the United States Census Bureau, the average age of Hoosiers is 37.4 years. The age group for Gen Z is 9 – 24 and the age group for millennials is 25 – 40. Given the average age of residents in Indiana, we can assume that many cities are comprised heavily of those two target demographics, Millennials and Gen Z. My analysis will look at each city in Indianapolis to determine which city (or cities) would be the best location for a new plant-based restaurant.

*Data*This analysis used publicly available data pertaining to Indiana cities from Wikipedia, population demographics from the United States Census Bureau. Restaurant data was gathered from HappyCow, an online resource hub aimed at making healthy food more accessible.

The data was analyzed using Python 3.8 and the code is stored within a Jupyter notebook. The data steps taken are outlined in the methodology below.

*Methodology*

First, I used code to web scrape a Wikipedia page to gather a full list of cities in Indiana. I cleaned the data and removed unnecessary rows. I then used data from HappyCow to remove any cities that already have vegan and/or vegetarian restaurants. Given that access to healthy alternatives is the primary interest of this study, I also removed cities that had restaurants with vegan or vegetarian options. To impact the greatest number of individuals, and help aid sustainability of a new restaurant, I removed cities that had a population less than 20,000.

After removing cities with vegan and/or vegetarian options and cities with populations under 20,000, seven cities remained. I researched the median age for each of the seven cities and with the intention to remove cities in which the median age was above 40, as 40 is the cap of the millennial age group. However, none of the cities had a median age over 40 years old. The median age for each of the remaining seven cities was between 33.8 and 38.4.

*Results*

Seven cities emerged from the analysis as opportunity locations for a new plant-based restaurant. Each of the cities have a population over 20,000 and they currently do not have any restaurants solely dedicated to vegans or vegetarians, nor do they have any restaurants that offer vegan or vegetarian options. The cities are Brighton, East Chicago, Hobart, Jeffersonville, Portage, Seymour, and Shelbyville.

Additionally, each of these cities have a median age that falls within the target generational group. According to the United States Census Bureau, the median age for Brighton is 37.5, East Chicago is 33.8, Hobart is 38.2, Jeffersonville is 37.9, Portage is 38.4, Seymour is 36.4, and Shelbyville is 36.2.

*The map below shows the location of each city. The majority of the cities are evenly dispersed across the state, which is a positive opportunity for greater access to healthier options for differing regions.*

*Figure 1*

Graphical user interface, application, map

Description automatically generated

*Discussion*

The results of this analysis identified seven cities across Indiana. The cities were located in the North East, North West, Central, and Southern regions of Indiana, offering a rather comprehensive distribution. Three of the cities were grouped in close proximity: Portage, Hobart, and East Chicago. It is possible that one centrally located restaurant could offer coverage for these three cities.

The cities selected are not only regionally diverse, but they also each demonstrate a need for plant-based options. The population size and median age of each city are both factors that are reasonably assumed to increase the viability of a successful plant-based restaurant.

The primary purpose of this analysis was to identify which cities in Indiana had a need for a plant-based restaurant. The next recommended step, outside the scope of this analysis, is to engage with the residents of each city through a series of town halls, focus groups, and surveys to better understand if there is a desire for plant-based options.

*Conclusion*

This analysis identified seven cities across Indiana that would be viable locations for a plant-based restaurant, as determined by current restaurant availability and population demographics. Three of these seven cities are close in proximity and could potentially share one centrally located restaurant. If one restaurant was centrally placed between those three cities, it would result in a total of five new plant-based restaurants in Indiana.

Increasing accessibility to healthier options is a benefit to the residents of these cities, and the state as a whole. Healthier diets result in a domino effect of positive outcomes ranging from overall individual health to less strain on the healthcare system. A healthier diet via a plant-based lifestyle offers even more positive outcomes by having an incredibly positive impact on the environment. Greater accessibility to healthier food options is becoming increasingly necessary across the United States for both the health of its citizens and the environment it inhabits.