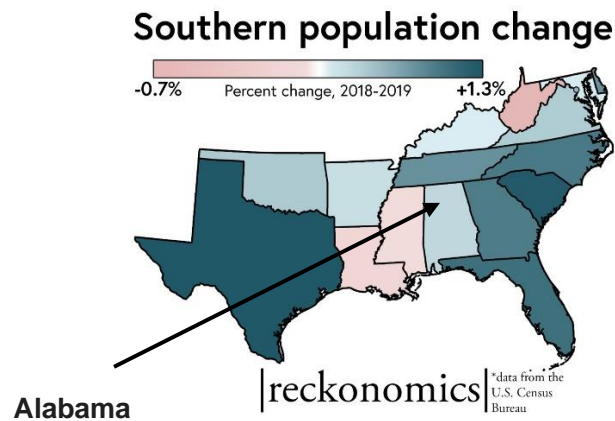


Where to open an American Restaurant in Alabama?

Introduction

A national American restaurant chain is seeking to add restaurant locations in every state in the Southern United States. The client is experiencing sales growth in all currently existing restaurant locations and is interested in expanding. This study focuses on the best location to open a restaurant in the state of Alabama.

Located in North America, Alabama is the 24th most populous state in the United States of America. It is having relatively stagnant population growth generally, but there is population movement within its respective cities. The graphic below illustrates Alabama's population growth comparatively with the rest of the American South. In 2019, the population of Alabama increased 0.3%, which was the 26th fastest rate of growth in the United States of America.



As illustrated in the graphic below, the fastest growing cities within Alabama are not concentrated in any particular area. There is population growth in the Northern, Southern, Eastern, and Central regions of Alabama. Further analysis is needed to determine the businesses that are located within these cities.

Alabama's growing cities

The top 10 fastest growing cities with at least 10,000 people (2010-2018)

Fastest growing

1. Fairhope (44.1%)
2. Chelsea (32.9%)
3. Foley (29.5%)
4. Gulf Shores (28.5%)
5. Calera (23.8%)
6. Auburn (23.2%)
7. Daphne (22.9%)
8. Athens (19.9%)
9. Madison (17.5%)
10. Helena (16.3%)

growth

44%

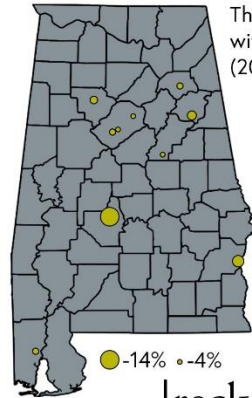
16%

reckonomics

*data from the U.S. Census Bureau

As illustrated in the graphic below, the slowest growing cities within Alabama are concentrated in the central region of Alabama, outside of any major cities. It would be best to avoid opening up any new businesses in these cities with declining populations. Further analysis is needed to determine the businesses that are located within these cities.

Alabama's shrinking cities



The state's fastest shrinking cities with at least 10,000 people (2010-2018)

Fastest shrinking

1. Selma (-13.8%)
2. Eufaula (-9.5%)
3. Anniston (-6.7%)
4. Jasper (-5.9%)
5. Prichard (-5.0%)
6. Gadsden (-4.6%)
7. Hueytown (-4.5%)
8. Fairfield (-4.5%)
9. Sylacauga (-4.4%)
10. Center Point (-4.13%)

|reckonomics| *data from the U.S. Census Bureau

This study will utilize Alabama city location and Foursquare data to evaluate existing business locations to determine the best locations to open a new American restaurant in Alabama.

Data

A list of Alabama cities and their respective Longitude and Latitude coordinates were retrieved from a csv file at: <https://simplemaps.com/data/us-cities>. This file also contained population information and other descriptive information. There were 584 cities in the dataset, but the data was sorted to include only the top 200 most populous cities in Alabama for this study. To enable retrieval, the .csv file was hosted on a personal Dropbox site at https://www.dropbox.com/s/r823yayzncnqe9q/al_cities_lat_long.csv?dl=0. Screenshots of these actions are below.

```
Alabama Cities and their Latitudes and Longitudes were retrieved from https://simplemaps.com/data/us-cities
```

```
In [19]: !wget -q -O 'al_cities_lat_long.csv' https://www.dropbox.com/s/r823yayzncnqe9q/al_cities_lat_long.csv?dl=0
          print('Data downloaded!')
```

Data downloaded!

Now that the data is downloaded, let's read it into a *pandas* dataframe and display the number of cities in our data set.

```
In [23]: al_cities = pd.read_csv('al_cities_lat_long.csv')
          print(al_cities.shape)
          al_cities.head()
```

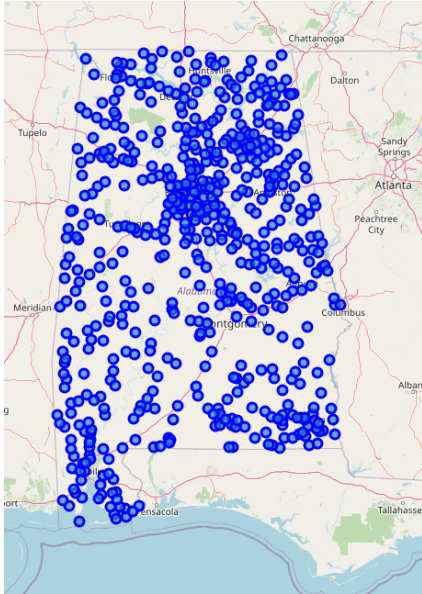
```
(200, 3)
```

```
Out[23]:
```

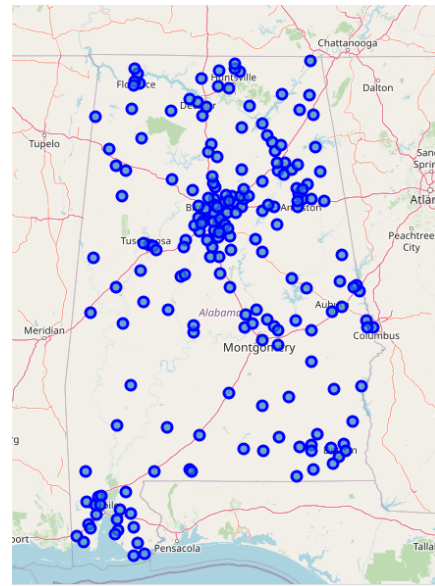
	City	Latitude	Longitude
0	Birmingham	33.5277	-86.7987
1	Huntsville	34.6988	-86.6412
2	Mobile	30.6783	-88.1162
3	Montgomery	32.3473	-86.2666
4	Tuscaloosa	33.2348	-87.5267

Once the data was brought into the Python notebook, Folium was used to display the cities on a map. The images below display a map of Alabama with all 548 cities in the original dataset and a map of Alabama with only the top 200 most populous cities in the dataset.

All 584 Cities in Alabama



200 Most Populous Cities in Alabama



A Foursquare developer account was created to obtain Foursquare credentials that enabled the gathering of Foursquare business type information.