Small College Towns - Are they all the same?

Background

In the spirit of the "The Battle of Neighborhoods" challenge, our neighborhood will be defined by small college towns. Small college towns are communities that are largely defined by the single largest industry in the town, namely higher education. They are the subject of intense interest for both parents and young adults for a relatively short period of time during the search for a college and the subsequent (hopefully four) years spent at that college. Every year, there are analyses performed by different entities that offer their guidance on the "best" colleges. An example of such guidance was offered in December 2019 (pre-pandemic) by WalletHub.com.

https://wallethub.com/edu/e/best-worst-college-cities-and-towns-in-america/8974/

The analysis was based on three key dimensions; Wallet Friendliness, Social Environment and Academic & Economic Opportunities. The interested reader can discover the details of their methodology at

https://wallethub.com/edu/e/best-worst-college-cities-and-towns-in-america/8974/#methodology

Our interest was in looking at other dimensions like climate and the businesses that are within walking distance of the campus. The primary objective of this analysis was to answer the following questions.

Are all small college towns pretty much the same? Or are there distinctive characteristics we can identify based on the walking distance businesses. If there are differences, can climate alone explain those differences?

Given the limited amount of time available for this analysis, our approach was to take the WalletHub top 25 small college towns (< 150,000 population) out of the available 200 as the set of college towns to analyze. Limiting the set in this way may prove limiting in our conclusions. We hope not!

If there are distinctive characteristics and college towns are not all the same, here are some possible business uses of the data and analysis

- 1. Local business development communities at lower ranked college towns could compare themselves to higher ranking college towns and determine what kinds of walking distance businesses they could encourage the development of in their town.
- 2. National or regional business chains could identify opportunities to expand into otherwise "similar" college towns that are currently under represented by their type of business.
- 3. College marketing groups could use distinctive characteristics in their outreach efforts for students.

Tell me about the Data

For each college town in our set, there are two data sets that were gathered.

1. Climate data – basic information concerning average temperatures, rain and snowfall, sunny days and elevation

2. Foursquare data – venue data within one mile of the college campus up to a limit of 100 venues per college.

The climate date was gathered using web searches and was compiled manually into an Excel spreadsheet which was then converted to a CSV file. The climate data will be used as the basis for an initial clustering of college towns.

The Foursquare data was gathered using the free developer API. The venue data will be used to characterize the "local neighborhood" for a college town from an on-campus student's perspective.

The combination of these two sets of data will be used to ultimately cluster colleges in attempt to see how homogenous they are or are not. Hopefully we will identify some truly distinctive characteristics and see if they can be explained by climate alone.