

Comparison of Chapel Hill, Charlotte and Nashville

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Goals

- Find the similarity between Chapel Hill, NC, Charlotte, NC and Nashville, TN.
- Potentially useful to consider neighborhoods when making a move

Value

- Show if a city or neighborhood you are considering moving to is similar to one in which you lived previously
- Gives alternate options if you are unhappy with where you live now

Data Acquisition and Cleaning

- City name, zip code, state and county scraped from

http://www.ciclt.net/sn/clt/capitolimpact/gw_ziplist.aspx?ClientCode=capitolimpact

- Longitude and latitude found from geocode
- Venues taken from the Foursquare API
- Removed duplicate latitude, longitude pairs and created frequency of each venue for the remaining pairs

Initial Analysis

- 210 unique venue types across 36 zip codes
- Charlotte leads with 219 total venues
- Suburbs of the major cities range from 58 - 1 venue within the radius of location

Modeling/Results

- KMeans clustering chosen for the unsupervised nature of this problem
- 7 centroids chosen to accentuate differences
- 30 zip codes found in the major group with 1 zip code in each of the other 6 groups
- Charlotte, Nashville, and Chapel Hill all found in the major grouping showing similarity

Conclusion and Future Direction

- Charlotte, Chapel Hill and Nashville are all similar in the venues available
- Add weather, crime, housing pricing data and walkability score for more factors
- Remove small suburbs and focus on individual neighborhoods in the major cities
- Create a recommendation system based approach to showing similarity between cities/neighborhoods