

IBM Data Science Capstone

IBM Applied Data Science Coursera

Taking a Trip to Charlotte, NC

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Introduction:

Charlotte is the most populous city in the U.S. state of North Carolina. Located in the Piedmont, it is the county seat of Mecklenburg County. Between 2004 and 2014, Charlotte was ranked as the country's fastest-growing metro area, with 888,000 new residents. Based on U.S. Census data from 2005 to 2015, Charlotte tops the U.S. in millennial population growth. It is the second-largest city in the southeastern United States, just behind Jacksonville, Florida. It is the third-fastest-growing major city in the United States with a huge variety of shops and restaurants, thus deciding where to visit is no easy task!

Business Problem:

We are taking a trip to Charlotte, NC. Time is valuable, so we will want to find the optimal spot to visit. Which is the area with the highest density of shops and restaurants within our price range. We will also want to find the venues in this area with the highest ratings and most likes, serving shopping, coffee, dinner, and drinks respectively, so we will know which venues to visit. Finally we will want a map to be able to easily find the locations.

The Target Audience:

Any Charlotteans looking for an efficient night on the town!

The Data:

We will use the Foursquare API to collect data for the venues of Charlotte NC. Foursquare has one of the largest databases of 105+ million places and is used by over 125,000 developers. Foursquare API will provide many categories of the venue data, we are particularly interested in venues providing: coffee, dinner, drinks, and shopping. This is a project that will make use of many data science skills, from working with API (Foursquare), data cleaning, data wrangling, to machine learning (K-means clustering) and map visualization (Folium).

- The geographical coordinates of Charlotte NC
- The geographical coordinates of restaurants and shopping in Charlotte NC. This will be returned by a Foursquare API “explore” query.
- The details, such as, likes, rating, and categories of venues within regions of Charlotte NC. This will be returned by Foursquare API “details” queries for each venue.