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UNCW BAN 530 APPLICATIONS IN BUS ANALYTICS

Market Saturation Report on Restaurants in

Bengaluru (aka Bangalore), India

## Objectives –

* Analyze Current Trends in Cuisine by city using Tableau or JMP.
  + What is the cuisine that appears most within a given city?
  + What are the reviews about the restaurants in each city?
* Explore Customer Preferences of attributes by city using Tableau or JMP.
  + Do most restaurants have delivery in each city?
  + Do most restaurants have online reservations in each city?
  + What are the most common things Customer reviews talk about in each city?
* Examine Types of restaurants in the area by city using Tableau or JMP.
  + Which type of restaurant is most present in each city?
    - What happens if more of this type of restaurant is added?
    - What happens if some of this type of restaurant closes?
  + Which type of restaurant is least present in each city?

## Analytical Methods –

* Preprocessing Data Analysis
  + Missing Values – Using the R Programming language in R Studio, missing values will be replaced by median values which is a simple, unbiased approach.
  + In R-studio, it may be useful to collapse some of the infrequently occurring categories into a catch-all "Other" group.
  + Save any “newly cleaned” file into a new \*.csv file to be used in Tableau or JMP.
  + Explore Outlier Data in JMP Analysis
* Exploratory Data Analysis
  + Using R Studio, look at the relationships between variables. Graph the suspected related variables using ggplot and determine correlation. Create a linear model or look at multivariate regression.
* Cuisine Segmentation Analysis
  + Using JMP to create graphs about the cuisines and their city location. Determine which cuisine is most popular in each city.
* Customer Preferences Analysis
  + Using JMP Analysis, look at tables regarding restaurants having delivery in each city.
  + Using JMP Analysis, look at tables regarding restaurants having online reservations in each city.
  + Using JMP Text Explorer,
    - Look at what words each city speaks about the most with a word cloud as well as Term and Phrase lists. Use word phrases with at least 4 characters and create a custom stop-word list. Look specifically at cuisines and rest\_type by city.
    - Examine the descriptions given about the most popular cuisine in each city from the Cuisine Segmentation Analysis.
* Restaurant Type Segmentation Analysis
  + Using Tableau create a simple dashboard,
    - create bar charts with analysis to look at the type of restaurant most prevalent in each city. This is probably what each city is best known for.
    - create scatterplot charts describing the type of restaurant with the least presence in each city as opportunities for growth. (It also may be that these types do not appeal to citizens in those cities.)
  + Using Organizational models and charts created in MS Word, demonstrate a decision model to guide decisions about the future? What to do if the market is saturated and you lose 10% of your customers or you have a supplier increase their costs by 10%. (Example: **Demand = a – b(Price\_for\_2\_People)** or **D = a - b(P)** where a is a constant that estimates the demand when the price is zero and b is the slope of the demand function.)