

# Identifying top business categories in a city

BATTLE OF NEIGHBORHOODS: IBM CAPSTONE PROJECT

# Prepared for: EasyBiz Marketing Solutions

Business need:  
Identify top business categories in each of the  
major cities.

# Strategy

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- ❑ A major city for business expansion is first identified, like New York City or San Francisco.
- ❑ Main data used is the list of cities, zip codes or neighborhoods for the city.
- ❑ For each of the cities or zip codes or neighborhoods, the latitude and longitude data is determined.
- ❑ With the latitude and longitude, a service like FourSquare can determine all the venues of interest, for all the cities, zip codes or neighborhoods in a major city within a certain radius.
- ❑ With the list of all the venues and businesses, we determine the businesses that are more frequent in each of the cities, zip codes or neighborhoods.
- ❑ Finally, we arrive at the list of businesses that are most common among the entire list of cities or zip codes or businesses.

# Analysis

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- ❑ Analysis starts with initial data with the Neighborhood, Borough, Latitude and Longitude transformed into a pandas dataframe
- ❑ We need the top venues or businesses in each of the neighborhoods in a city that are in a walkable distance from the center of the city.
- ❑ We then determine how many venues/businesses are returned for each of the neighborhoods.
- ❑ The next step is to determine the relative frequency of each of the venues/businesses within each neighborhood.

```
----Hillcrest----
      venue  freq
0      Ice Cream Shop  0.12
1      Coffee Shop  0.12
2      Food Truck  0.12
3      Food Court  0.12
4      Donut Shop  0.12
5      Pizza Place  0.12
6  College Academic Building  0.12
7      Deli / Bodega  0.12
8  Vegetarian / Vegan Restaurant  0.00
9      Outdoors & Recreation  0.00
10     Outdoor Sculpture  0.00
```

# Next Steps

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- ❑ The final step in this process is to consolidate the most common venues in each of the neighborhoods.
- ❑ This results in the list of the top venues that are common among most of the neighborhoods.
- ❑ This is the list that EasyBiz can use to customize their presentations to reach as many of the businesses of the same type as possible, in the most neighborhoods.
- ❑ EasyBiz can start from the top and work on upto 5 top businesses and customize their presentations to reach the most potential clients as possible.

	1st Most Common Venue	Neighborhood
0	Deli / Bodega	26
1	Pizza Place	16
2	Playground	11
3	Park	8
4	Bus Station	8
5	Italian Restaurant	8
6	Bar	7
7	Grocery Store	7
8	Chinese Restaurant	7
9	Bank	5

# Conclusion

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- ❑ EasyBiz customizes their sales presentation to tailor to the needs of the top businesses during their outreach.
- ❑ With the knowledge of which business is the most frequent in which neighborhood, EasyBiz can put together a marketing strategy targeted to just these business categories.
- ❑ When multiple businesses of the same type are targeted, EasyBiz can be profitable using their scalable marketing techniques.
- ❑ This is a Win-Win for EasyBiz and their clients.