

**October 9, 2018**

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**Prepared for:**

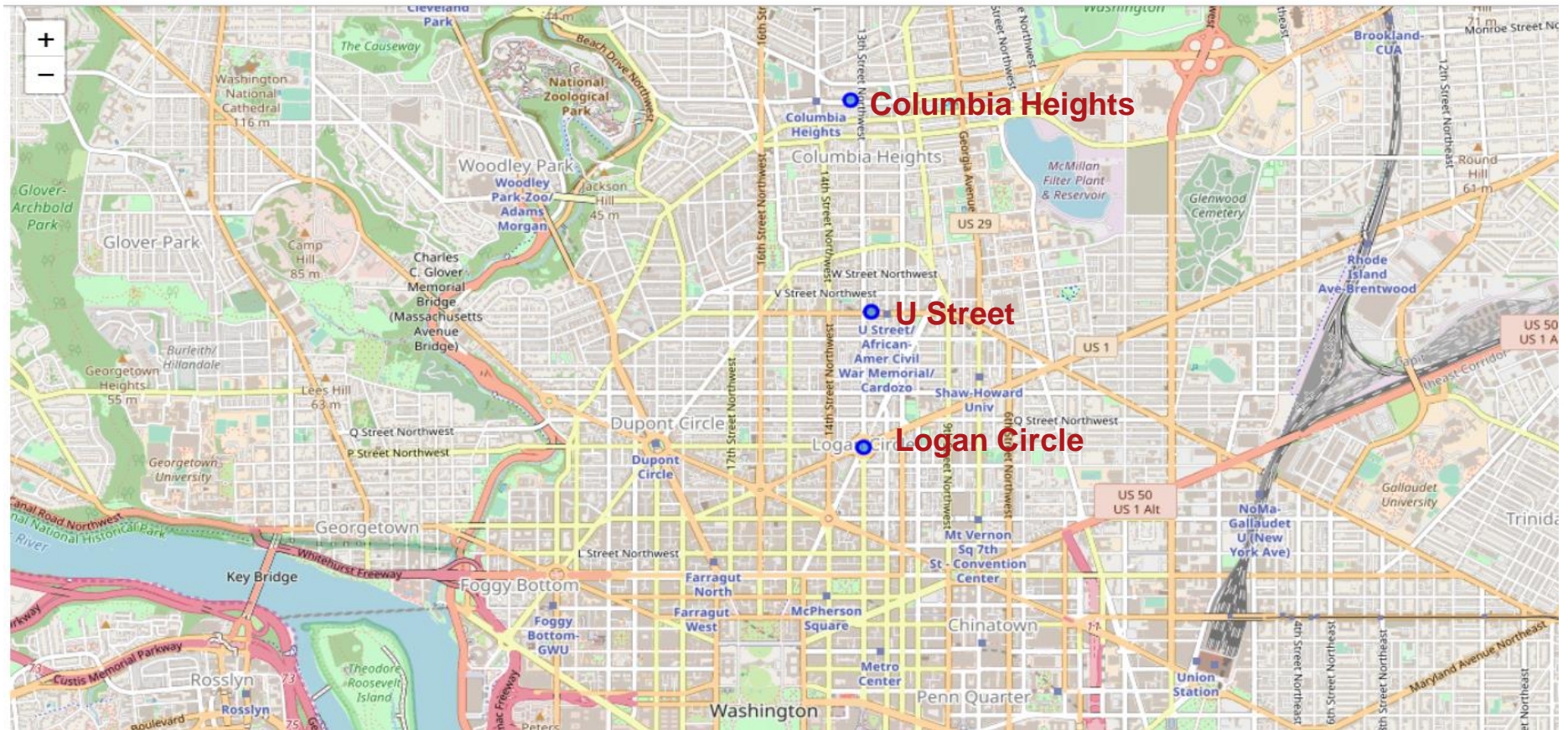
**Ears Down Ox**

## Objective and Approach

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- **We have been asked to recommend a restaurant location for the owners of *Ears Down Ox*, a restaurant in NW Washington, DC**
- **We have been given three neighborhood options to consider:**
  - **Logan Circle**
  - **U Street Corridor**
  - **Columbia Heights**
- **We have utilized the follow data sets:**
  - Four Square Data through API
  - Yelp Reviews (top 500 restaurants in Washington DC)
  - Google Maps Data

# Map Locations



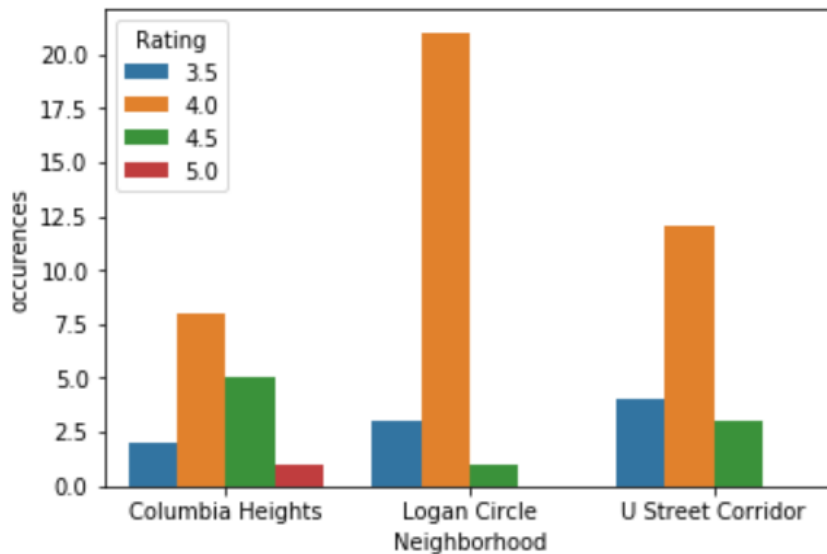
## Four Square Data – top 10 venue types in each neighborhood

Order	Columbia Heights	U St.	Logan Circle
1	Bakery	American Restaurant	Bar
2	Vietnamese Restaurant	Italian Restaurant	Restaurant
3	Pizza Place	Coffee shop	American Restaurant
4	Bar	Cocktail Bar	Taco Place
5	Music Venue	Wine Bar	Mexican Restaurant
6	Coffee Shop	New American Restaurant	New American Restaurant
7	Carribean Restaurant	Thai Restaurant	Coffee Shop
8	Ethiopian Restaurant	Sushi Restaurant	Pizza Place
9	Pet Store	Ethiopian Restaurant	Cocktail Bar
10	Park	Gay Bar	Southern Restaurant

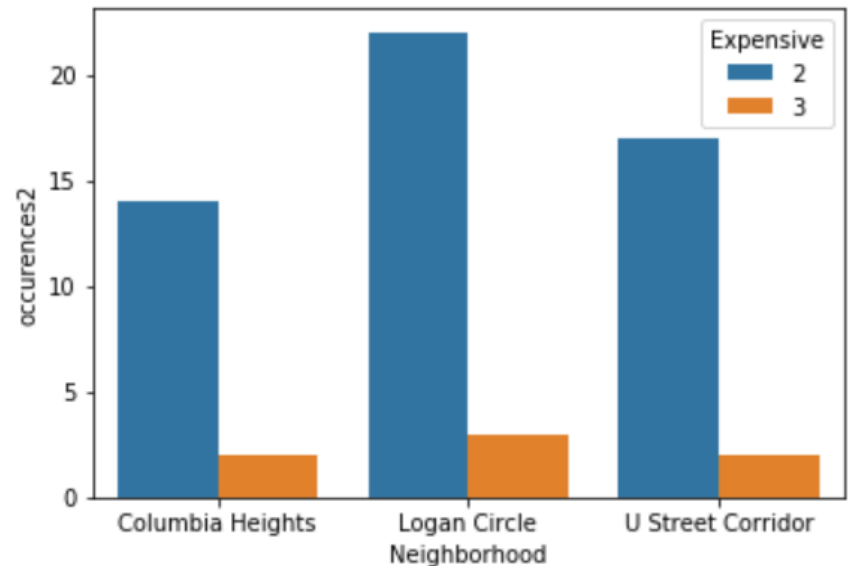
- In each neighborhood, restaurants are explicitly called out
  - 5 out of top 10 venues are restaurants in Columbia Heights
  - 6 out of top 10 venues are restaurants in U Street
  - 5 out of top 10 venues are restaurants in Logan Circle
- Columbia Heights is the only neighborhood with non food/beverage venues in the top 10

# Yelp Data

# Restaurants by Star Rating and Neighborhood



# Restaurants by Expense Level and Neighborhood



- Columbia Heights has the smallest # of restaurants in the top 500, but the highest concentration of 4.5 and 5 star rated restaurants
- Logan Circle has the largest # of restaurants in the top 500; many are rated 4.0 out of 5.0 stars
- All three neighborhoods have either 2 or 3 restaurants at the same price point as our client's new restaurant (3 \$\$\$s)

## **We recommend putting the restaurant in Columbia Heights**

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- **Columbia Heights has a good concentration of highly related restaurants**
- **It only has two 3 \$\$\$ restaurants, the price point at which Ears Down Ox will operate**
- **It seems to be slightly less congested than U Street and Logan Circle, based on total # of restaurants and venues**
- **Logan Circle and U Street have a large concentration of 4 star (not 4.5 or 5) restaurants**

## Yelp Reviews – Further Investigation

- **While not the focus of this study, we performed a linear regression on average star ranking and # reviews to see if Yelp rankings could be predicted**
  - *Our analysis did not yield an accurate model, although we believe that with better access to data (e.g. the # of yelp power users rating each restaurant), we could come closer to*
- **We also created a decision tree to predict whether a restaurant would have a good review (4.0 or higher) based on total # reviews, type of cuisine (e.g. Italian, Mexican) and other metrics. Our accuracy was 68% and we believe that better data would allow us to generate greater accuracy**

**Questions?**

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