



# A BOSTON BREWERY – WHAT NEIGHBORHOOD IS MOST IDEAL?

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FINAL CAPSTONE PROJECT  
IBM/COURSERA



# A BREWING COMPANY WANTS TO ADD A SECOND LOCATION IN BOSTON... BUT WHERE?

- The company wants to locate in a neighborhood that lacks breweries but is close to a college or university area that attracts students with student centers and residential housing
- There are **26 neighborhoods in Boston**
- Boston is a central hub for higher ed like Boston University, Northeastern University, Umass Boston, and community colleges
- College students enjoy nightlife and places to socialize and drink!

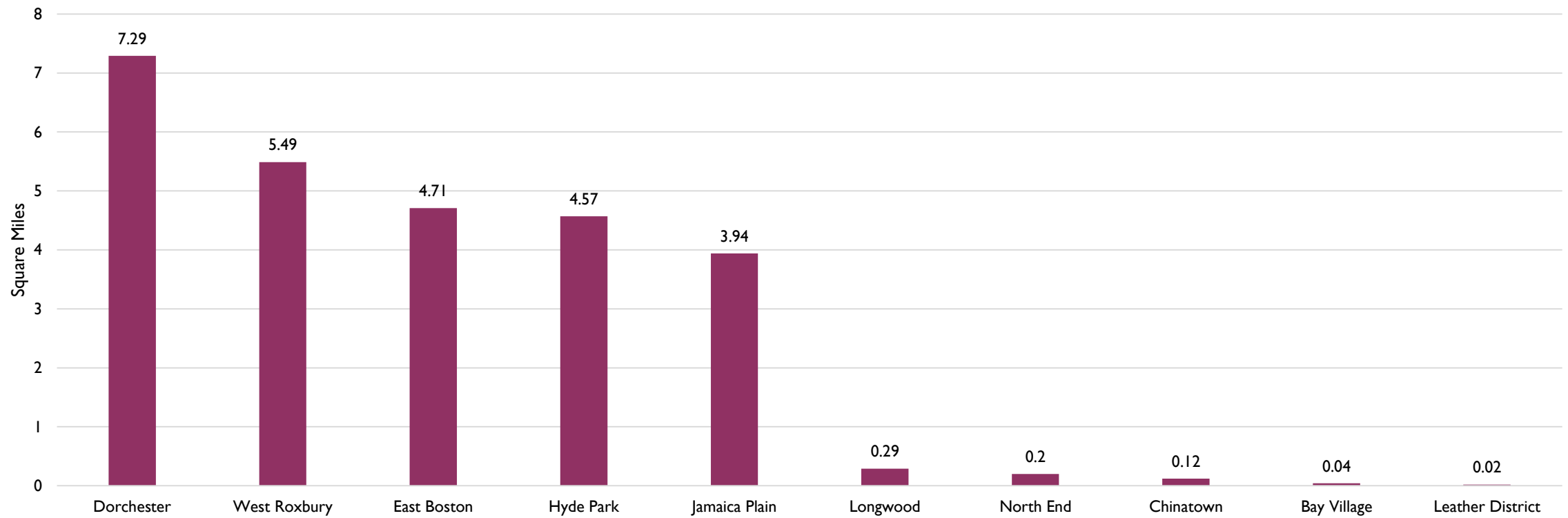
# DATA SOURCES

- Foursquare API Endpoints
  - Will help visualize location and venue data within Boston
    - College and University endpoint
    - Brewery endpoint
- City of Boston neighborhood data (<https://data.boston.gov/dataset/boston-neighborhoods>)
  - Listing of official neighborhoods and acreage/square mileage

# Spread of Boston's 26 Neighborhoods

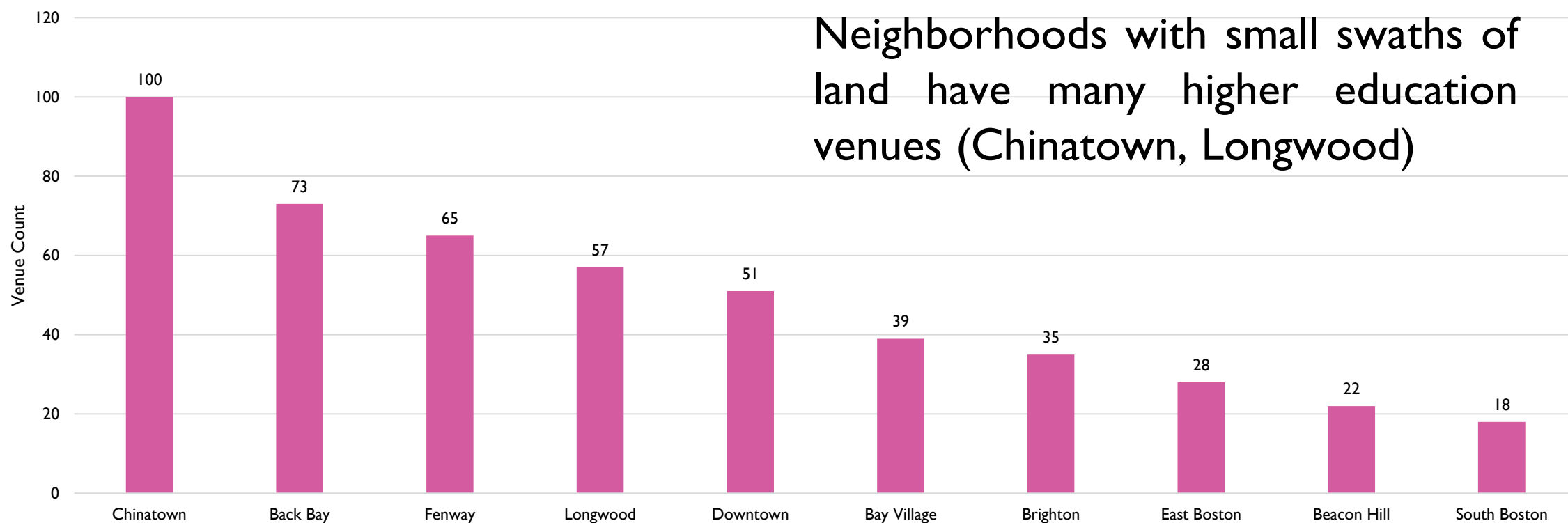


# LARGE VS. SMALL BOSTON NEIGHBORHOODS



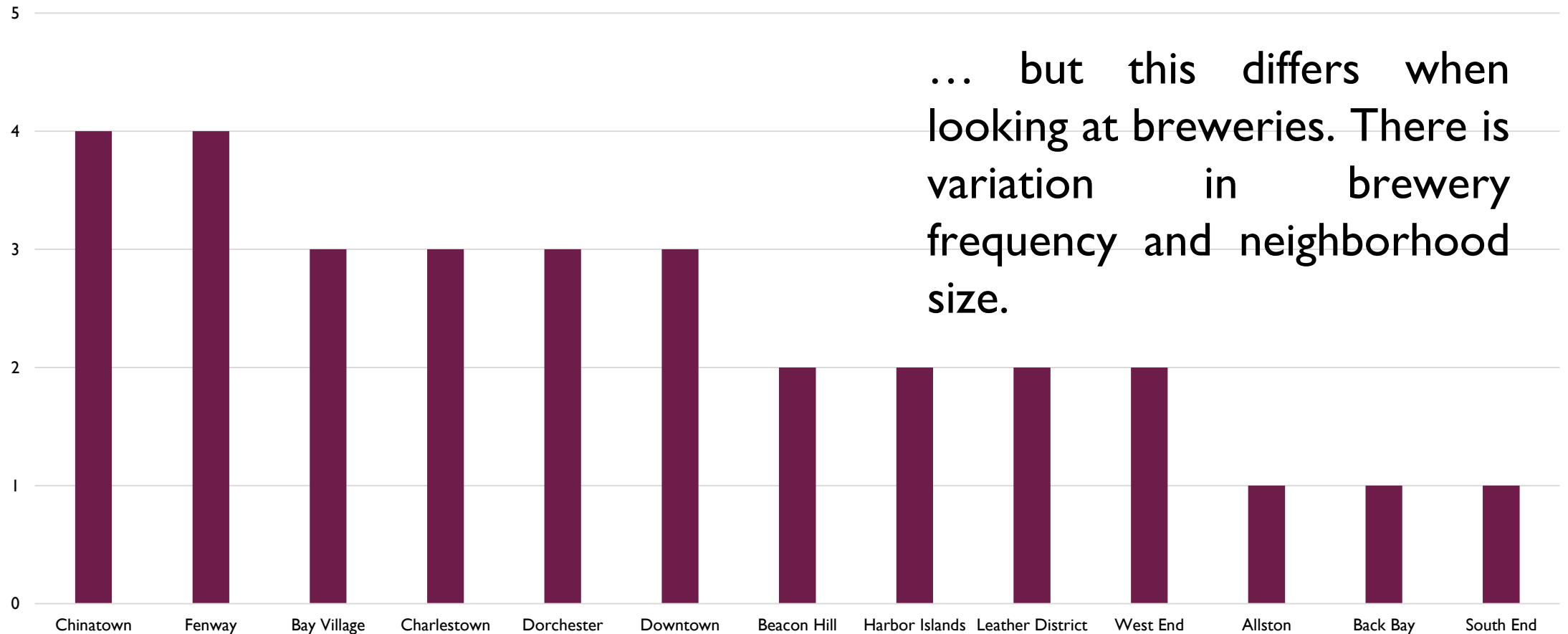
## NEIGHBORHOODS W/ MOST UNIVERSITY VENUES

Neighborhoods with small swaths of land have many higher education venues (Chinatown, Longwood)



Note: Foursquare API limits venue searches to 100 venues.

## NEIGHBORHOODS W/ MOST BREWERY VENUES





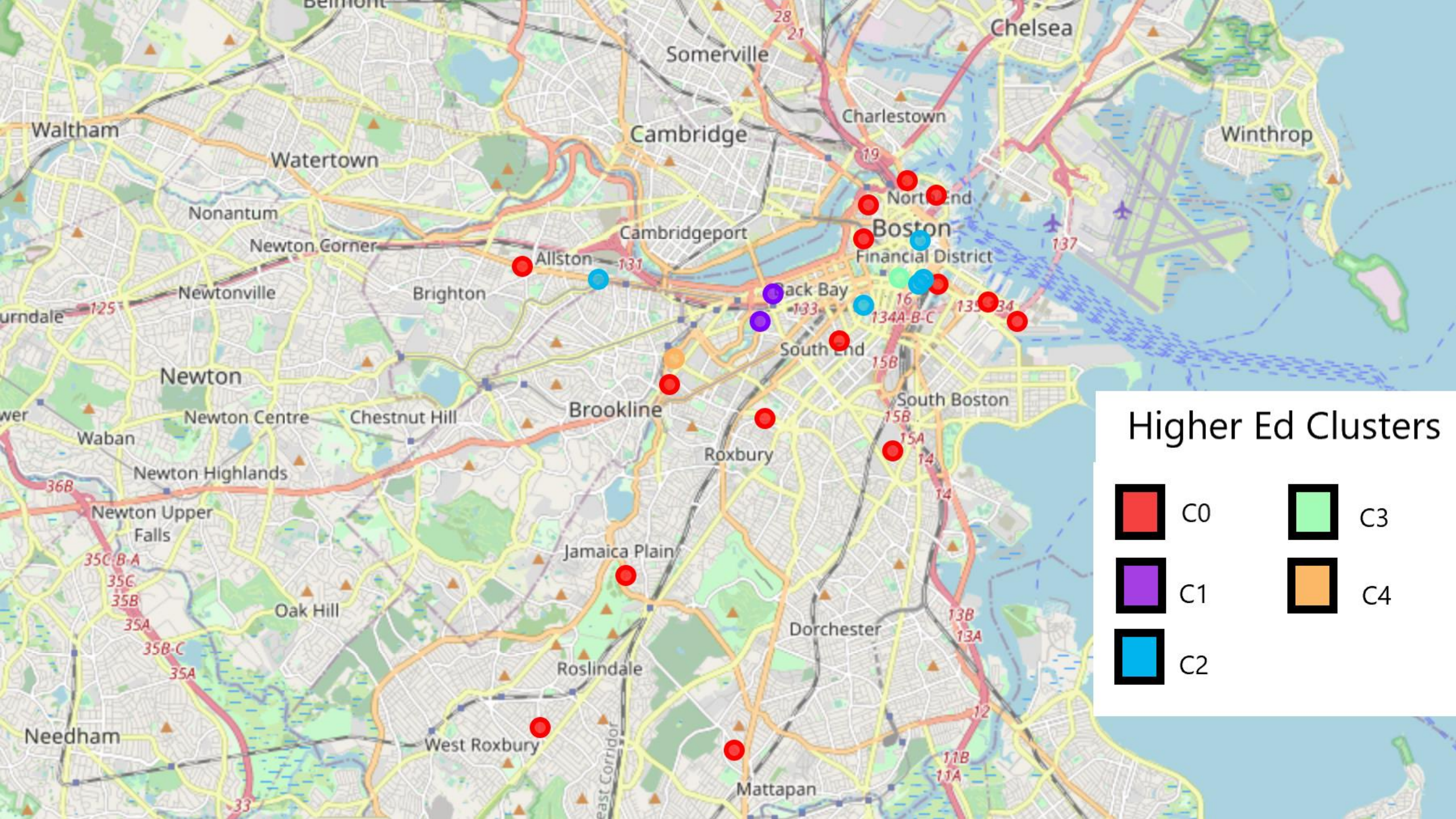
# OTHER DATA OBSERVATIONS

Neighborhoods w/ large frequency of academic buildings, residential halls, **and** student centers:






Back Bay  
Chinatown  
Downtown  
Fenway  
Longwood







## Higher Ed Clusters

- |   |    |  |    |
|---|----|--|----|
|    | C0 |   | C3 |
|   | C1 |  | C4 |
|  | C2 |  |    |

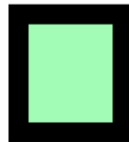


# HIGHER ED CLUSTER OBSERVATIONS

## Higher Ed Clusters



C0



C3



C1



C4



C2

**C0:** Various university venues, but lacking centers of student interaction

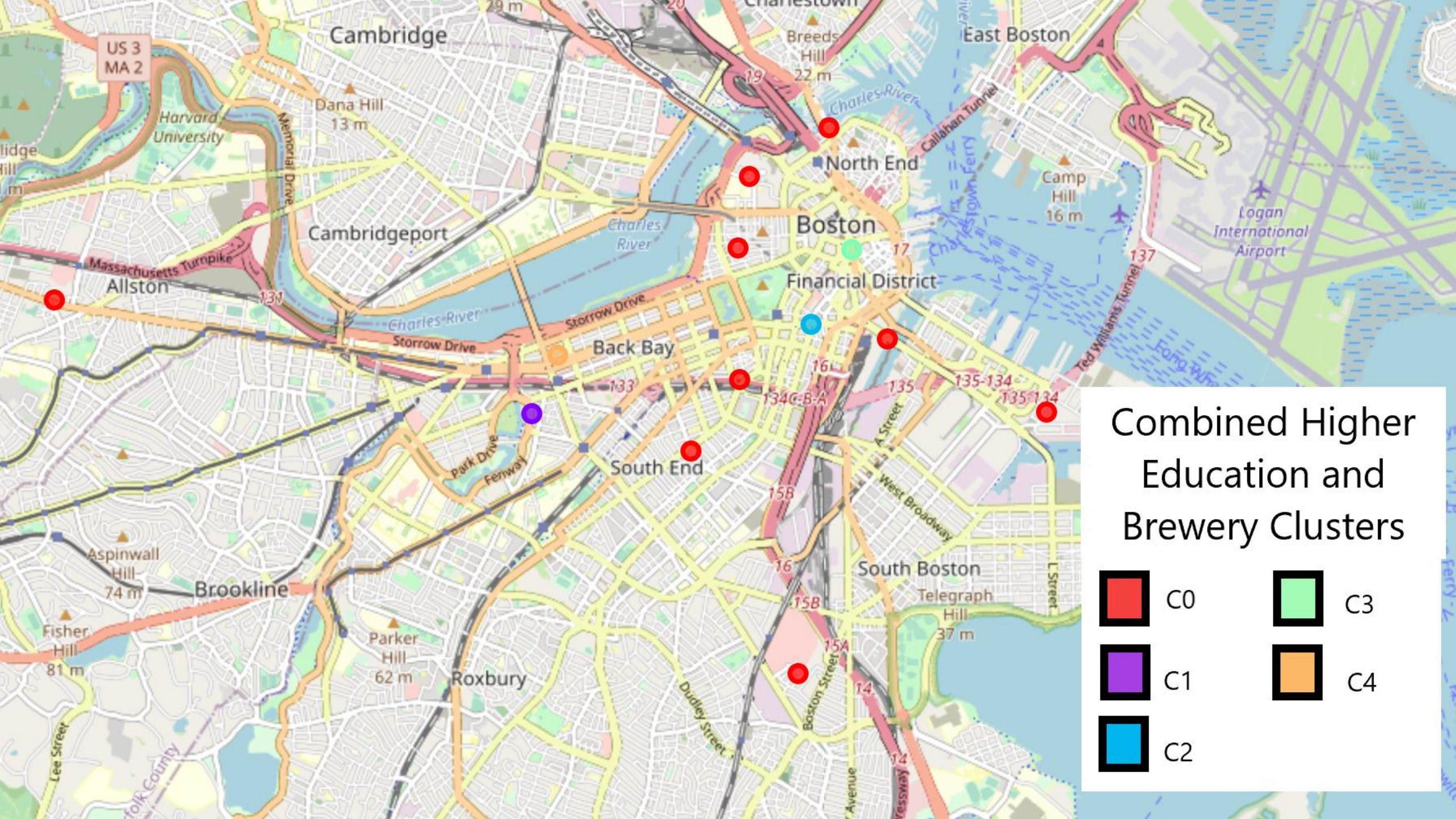
**C1:** Mostly college arts and academic buildings but hold multiple areas of student gatherings  
**ex. Back Bay, Fenway**

**C2:** Various general higher ed facilities/administrative buildings, not as much for student interaction

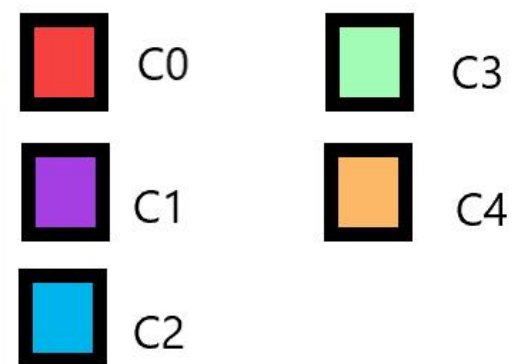
**C3:** Various medical school facilities and student gathering areas  
**ex. Chinatown**

**C4:** Various medical school facilities and student gathering areas  
**ex. Longwood**





## Combined Higher Education and Brewery Clusters





# COMBINED CLUSTER OBSERVATIONS

## Combined Higher Education and Brewery Clusters



C0



C3



C1



C4



C2

**C0:** Breweries are just as common as higher education venues

**C1: Fenway neighborhood** – good frequency of higher ed facilities, areas of student interaction, and breweries

**C2: Chinatown neighborhood** – multiple higher ed venues and areas of student interaction, has breweries but not among most common venues

**C3: Downtown neighborhood** – has multiple higher ed facilities and areas of student interactions, as well as breweries

**C4: Back Bay neighborhood** - multiple higher ed venues and areas of student interaction, has breweries but not among most common venues

# BACK BAY VS. CHINATOWN

## Back Bay

- 0.62 square miles
- 73 higher ed venues
  - Berklee College of Music
  - Boston Conservatory
  - Boston Architectural College
- 1 brewery
  - Edge!



## Chinatown

- 0.12 square miles
- 100+ higher ed venues
  - Tufts Medical School
  - New England Law
  - Emerson College
- 4 breweries
  - Democracy Brewing Company
  - Rock Bottom Brewery
  - Boston Beer Company
  - Back Deck





# CONCLUSION

- **Back Bay** is the ideal location to place a brewery, due to its multitude of higher education venues, areas of student interaction, and lack of breweries in the neighborhood.
- Not surprising that neighborhoods with most higher ed facilities were in the most popular parts of Boston
- Clustering helped filter out neighborhoods that lacked higher education and/or brewery venue categories
  - Caveat: May filter out neighborhoods that have **zero breweries** but have plenty of higher ed venues
- **Future research**: How would the result differ if we clustered based on *all nightlife venues* instead of just brewery-like venues? Would Back Bay have been selected?