

Where to Open Coffee Shops around ASU?

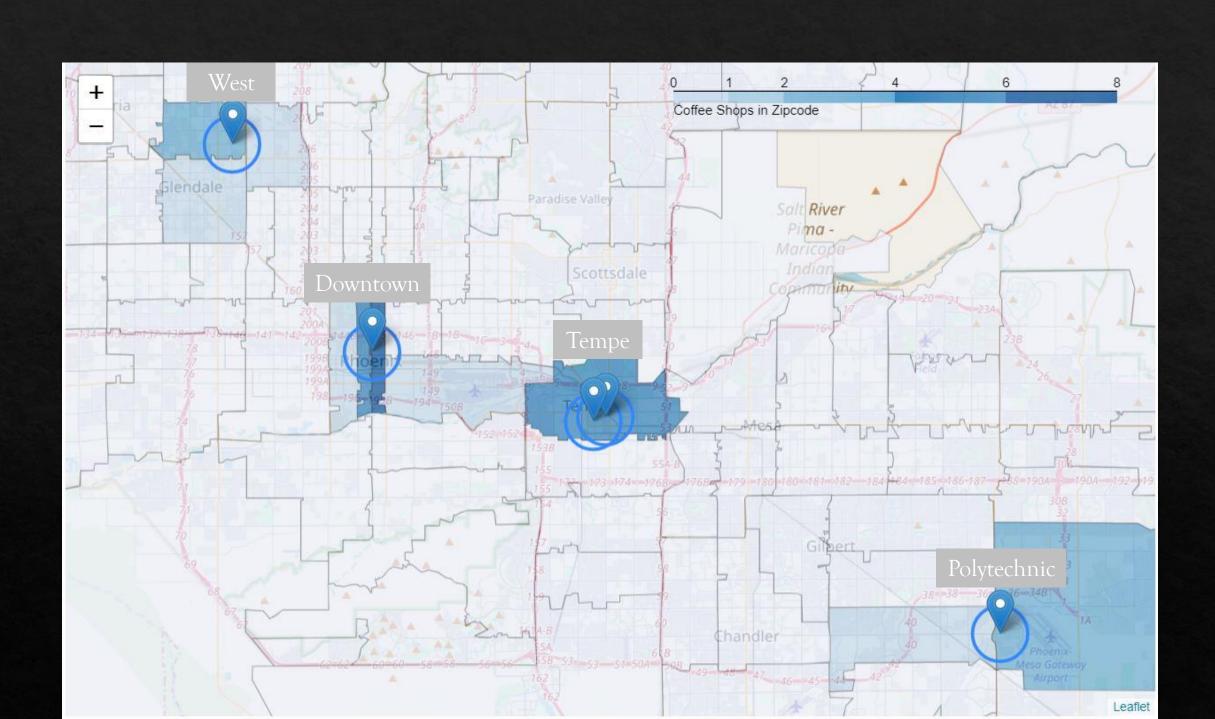
- ASU Campuses: Downtown, Polytechnic, Tempe and West
- ♦ Each campus differs in amount and types of venues
 - Explore using FourSquare API, Geopy Nominatim
 - ♦Graph using Folium

Target Audience

- ♦ Aspiring restaurant owners with focus on coffee shops
- ♦ Most restaurants close within a year of opening
- ♦ Best possible start with best possible location

Exploring Coffee Shops and Restaurants

.ee	Zipcode	Coffee Shop Freq	Total Coffee Shops	Total Restaurants
0	85003	0.076923	4	18.0
1	85004	0.152174	7	10.0
2	85007	0.000000	0	1.0
3	85034	0.000000	0	0.0
4	85051	0.000000	0	1.0
5	85212	0.080000	2	5.0
6	85236	0.000000	0	3.0
7	85280	0.333333	1	0.0
8	85281	0.045455	4	45.0
9	85287	0.103448	3	12.0
10	85295	0.000000	0	2.0
11	85301	0.000000	0	4.0
12	85302	0.034483	2	24.0



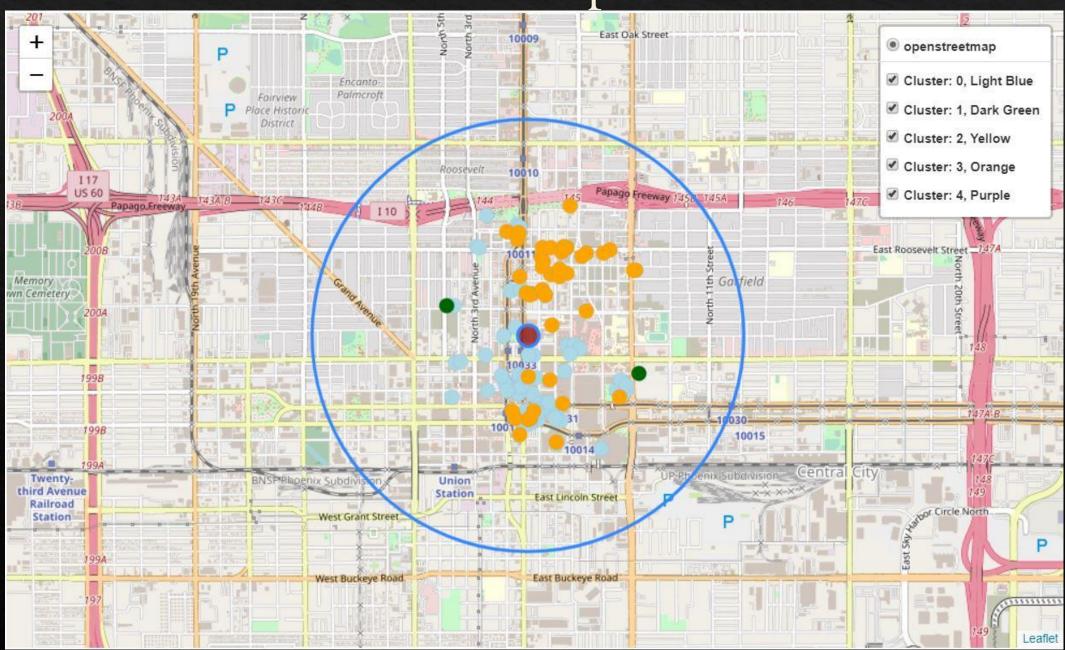
Top 10 Venues within 1 Mile of Each Campus

Zipcode	#1 Most Common Venue	#2 Most Common Venue	#3 Most Common Venue	#4 Most Common Venue	#5 Most Common Venue	#6 Most Common Venue	#7 Most Common Venue	#8 Most Common Venue	#9 Most Common Venue	#10 Most Common Venue
85003	American Restaurant	Coffee Shop	Pizza Place	Hotel	Music Venue	Park	Salon / Barbershop	Theater	Thai Restaurant	Sandwich Place
85004	Coffee Shop	Hotel	Breakfast Spot	Art Gallery	Bar	New American Restaurant	Cocktail Bar	Market	Science Museum	Sandwich Place
85007	Pizza Place	Yoga Studio	Chinese Restaurant	Coffee Shop	College Baseball Diamond	College Stadium	Comedy Club	Comic Shop	Construction & Landscaping	Convenience Store
85034	Museum	Yoga Studio	History Museum	Coffee Shop	College Baseball Diamond	College Stadium	Comedy Club	Comic Shop	Construction & Landscaping	Convenience Store
85051	Convenience Store	Park	Grocery Store	Hunting Supply	Italian Restaurant	Yoga Studio	Dive Bar	Discount Store	Dessert Shop	Deli / Bodega
85212	Rental Car Location	Airport Terminal	Airport	Hotel	Coffee Shop	Wings Joint	Convenience Store	American Restaurant	Brewery	Fast Food Restaurant
85236	Fast Food Restaurant	Home Service	Smoke Shop	Golf Driving Range	Hotel	Construction & Landscaping	Miscellaneous Shop	Paper / Office Supplies Store	Sandwich Place	Bank
85280	Coffee Shop	Pool Hall	Convenience Store	Yoga Studio	Chinese Restaurant	College Baseball Diamond	College Stadium	Comedy Club	Comic Shop	Construction & Landscaping
85281	Pizza Place	Bar	Sandwich Place	Coffee Shop	Chinese Restaurant	American Restaurant	Burger Joint	Restaurant	Breakfast Spot	Brewery
85287	Coffee Shop	Mexican Restaurant	Deli / Bodega	Sandwich Place	Fried Chicken Joint	New American Restaurant	College Stadium	Comedy Club	Middle Eastern Restaurant	Burger Joint
85295	Asian Restaurant	Sandwich Place	Big Box Store	Yoga Studio	Donut Shop	Dive Bar	Discount Store	Dessert Shop	Deli / Bodega	Ethiopian Restaurant
85301	Intersection	Bar	Chinese Restaurant	Shop & Service	Pizza Place	Garden	Thai Restaurant	Mexican Restaurant	Convenience Store	Discount Store
85302	Pizza Place	Grocery Store	Mexican Restaurant	Donut Shop	Gas Station	Bar	Pharmacy	Chinese Restaurant	Coffee Shop	Intersection

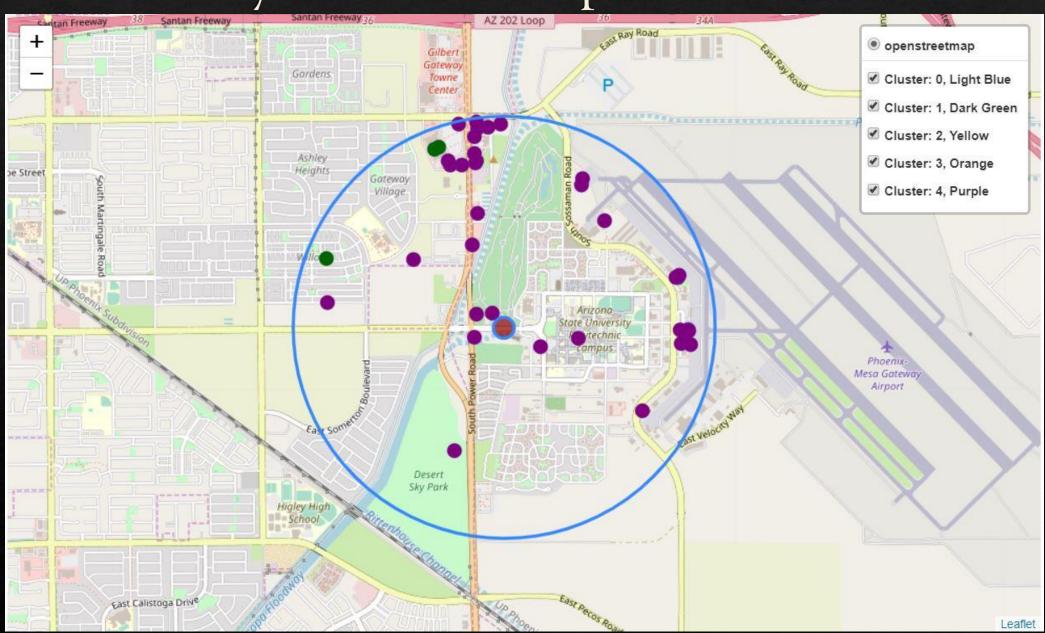
Clustering Based on Venue Information

#9 Most Common Venue	#8 Most Common Venue	#7 Most Common Venue	#6 Most Common Venue	#5 Most Common Venue	#4 Most Common Venue	#3 Most Common Venue	#2 Most Common Venue	#1 Most Common Venue	Total Restaurants	Total Coffee Shops	Coffee Shop Freq	Cluster	Zipcode
Thai Restaurant	Theater	Salon / Barbershop	Park	Music Venue	Hotel	Pizza Place	Coffee Shop	American Restaurant	18.0	4	0.076923	0	85003
Coffee Shop	Chinese Restaurant	Pharmacy	Bar	Gas Station	Donut Shop	Mexican Restaurant	Grocery Store	Pizza Place	24.0	2	0.034483	0	85302
Construction & Landscaping	Comic Shop	Comedy Club	College Stadium	College Baseball Diamond	Coffee Shop	Chinese Restaurant	Yoga Studio	Pizza Place	1.0	0	0.000000	1	85007
Construction & Landscaping	Comic Shop	Comedy Club	College Stadium	College Baseball Diamond	Coffee Shop	History Museum	Yoga Studio	Museum	0.0	0	0.000000	1	85034
Dessert Shop	Discount Store	Dive Bar	Yoga Studio	Italian Restaurant	Hunting Supply	Grocery Store	Park	Convenience Store	1.0	0	0.000000	1	85051
Comic Shop	Comedy Club	College Stadium	College Baseball Diamond	Chinese Restaurant	Yoga Studio	Convenience Store	Pool Hall	Coffee Shop	0.0	1	0.333333	1	85280
Deli / Bodega	Dessert Shop	Discount Store	Dive Bar	Donut Shop	Yoga Studio	Big Box Store	Sandwich Place	Asian Restaurant	2.0	0	0.000000	1	85295
Breakfast Spot	Restaurant	Burger Joint	American Restaurant	Chinese Restaurant	Coffee Shop	Sandwich Place	Bar	Pizza Place	45.0	4	0.045455	2	85281
Science Museum	Market	Cocktail Bar	New American Restaurant	Bar	Art Gallery	Breakfast Spot	Hotel	Coffee Shop	10.0	7	0.152174	3	85004
Middle Eastern Restaurant	Comedy Club	College Stadium	New American Restaurant	Fried Chicken Joint	Sandwich Place	Deli / Bodega	Mexican Restaurant	Coffee Shop	12.0	3	0.103448	3	85287
Brewery	American Restaurant	Convenience Store	Wings Joint	Coffee Shop	Hotel	Airport	Airport Terminal	Rental Car Location	5.0	2	0.080000	4	85212
Sandwich Place	Paper / Office Supplies Store	Miscellaneous Shop	Construction & Landscaping	Hotel	Golf Driving Range	Smoke Shop	Home Service	Fast Food Restaurant	3.0	0	0.000000	4	85236
Convenience Store	Mexican Restaurant	Thai Restaurant	Garden	Pizza P <mark>l</mark> ace	Shop & Service	Chinese Restaurant	Bar	Intersection	4.0	0	0.000000	4	85301

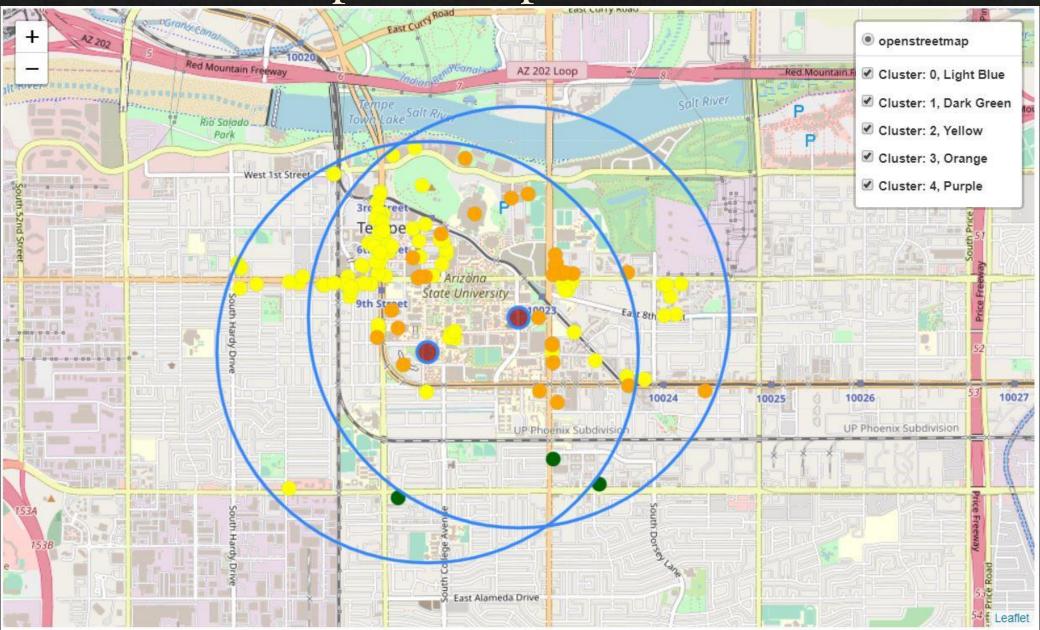
Downtown Campus Clusters



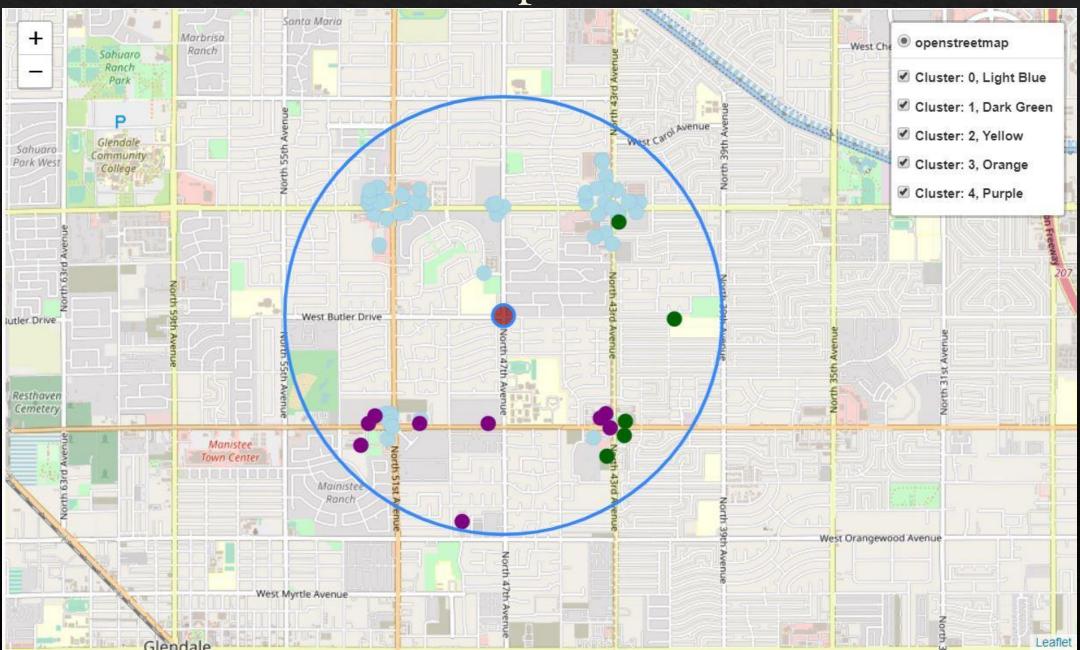
Polytechnic Campus Clusters



Tempe Campus Clusters



West Campus Clusters



Recommendations

Cluster 2 at Tempe

- Large student population
- Lots of restaurants and bars, only 4 coffee shops
- Low direct competition, high indirect competition

Cluster 0 at West

- Smaller student population
- Fewer restaurants and only 2 coffee shops
- Low direct/indirect competition

Avoid

Cluster 3

- Highest number of coffee shops
- Most common restaurants are Deli's and Bagel Shops

Cluster 1

- Fewest venues but most locations
- No restaurants, and only 1 coffee shop across 5 zipcodes

Cluster 4

- Primarily located next to an airport
- Only at smallest campus
- On outer limits of radius