



# BATTLE OF THE NEIGHBORHOODS

LOS ANGELES POLICE STATIONS





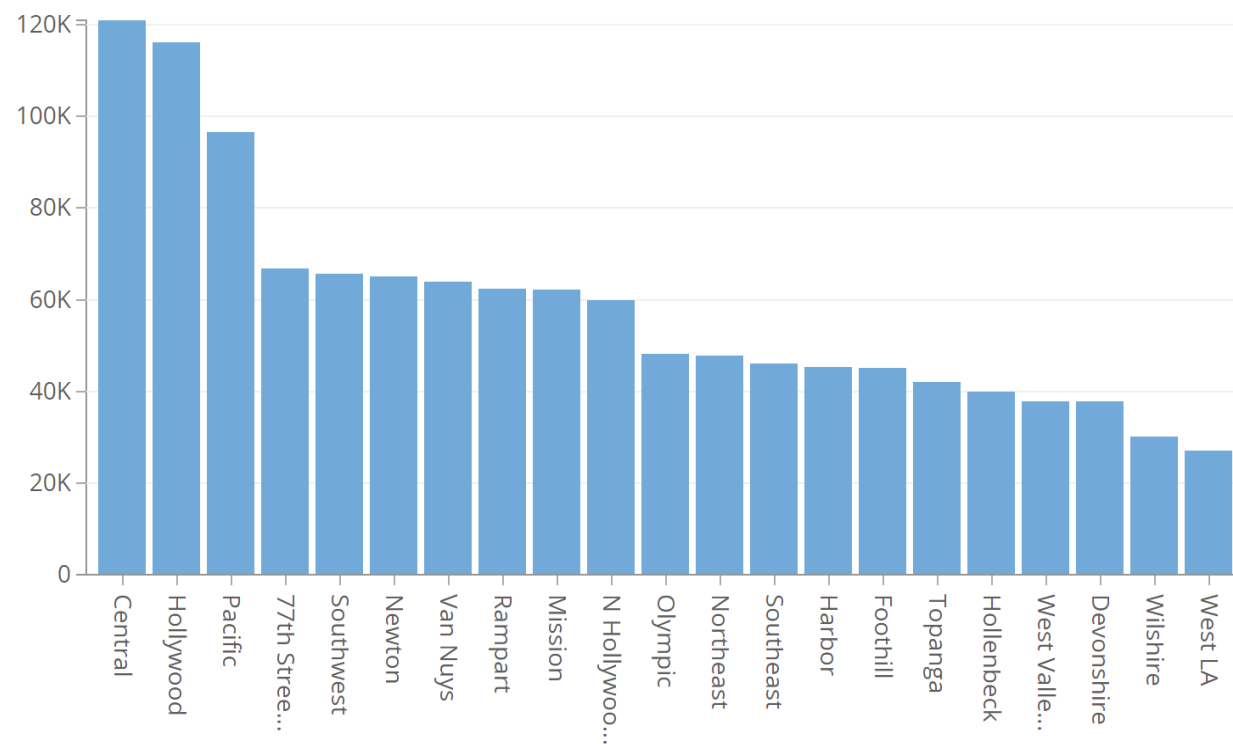
# BUSINESS PROBLEM

WHICH POLICE STATION NEIGHBORHOOD IS THE “BEST”?



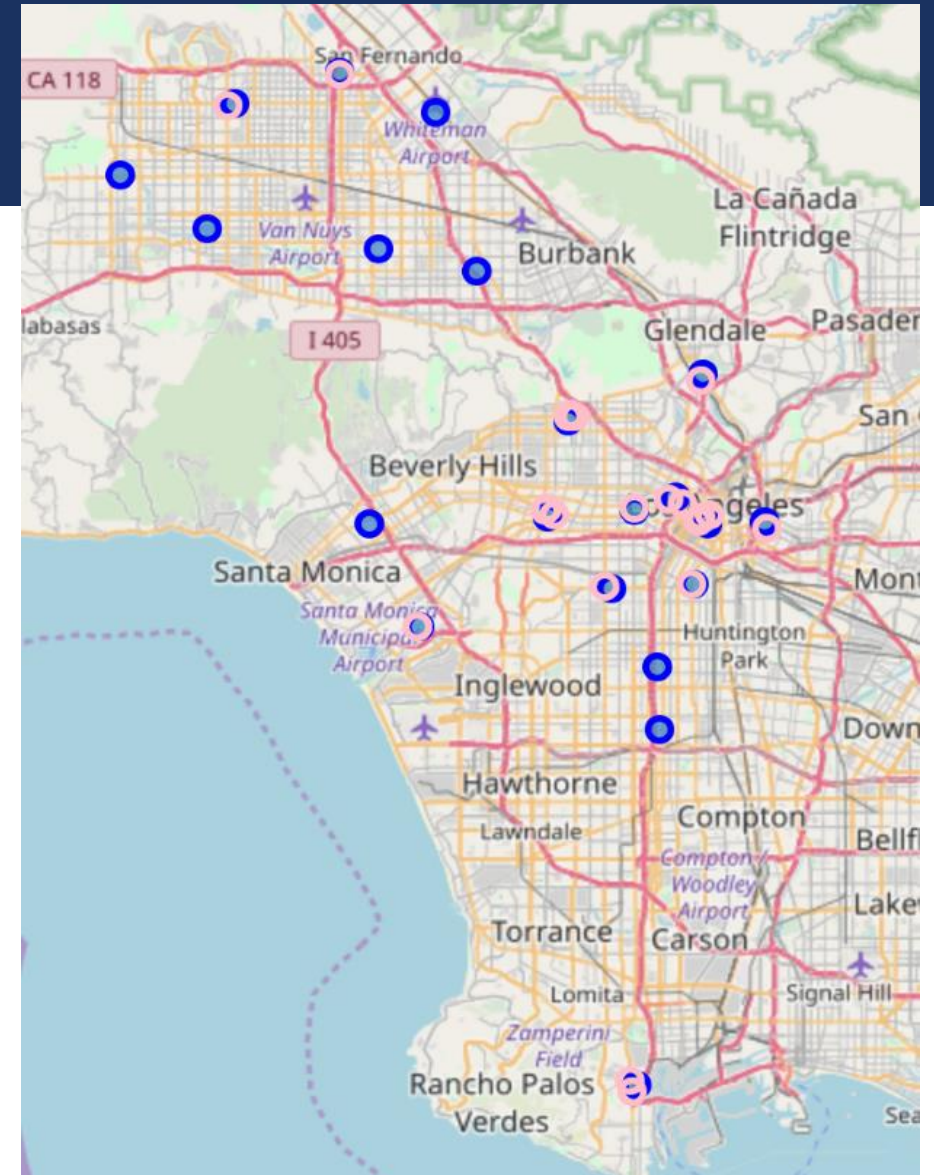
# ARRESTS BY POLICE DIVISION

- Count of arrests by Los Angeles Police Department division (21 divisions)
- Data from the LAPD containing arrests from 2010 to the present



# LOCATIONS OF POLICE STATIONS & NEARBY COFFEE & DONUT SHOPS

- Map of LA with indicators for police stations (blue) and nearby coffee and donut shops (pink)
- Data from the City of LA and Foursquare.com



# COFFEE & DONUT SHOP STATISTICS

- Count of coffee & donuts shops near each police station that has any
- Average visitor rating of coffee & donut shops near each police station
- Data from Foursquare.com

Neighborhood	Count
CENTRAL	4
DEVONSHIRE	1
HARBOR	2
HOLLENBECK	1
HOLLYWOOD	5
MISSION	1
NEWTON	1
NORTHEAST	1
OLYMPIC	1
PACIFIC	2
RAMPART	2
SOUTHWEST	1
WILSHIRE	3

Neighborhood	Coffee/Donut Shops Avg Rating
CENTRAL	8.25
DEVONSHIRE	5.80
HARBOR	3.35
HOLLENBECK	0.00
HOLLYWOOD	8.06
MISSION	7.40
NEWTON	0.00
NORTHEAST	6.40
OLYMPIC	7.20
PACIFIC	0.00
RAMPART	7.45
SOUTHWEST	0.00
WILSHIRE	7.20

# NEARBY VENUES

- Top 10 most common venues by police station neighborhood

- Data from Foursquare.com

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	77TH STREET	Print Shop	Chinese Restaurant	Trail	Taco Place	Food	Wings Joint	Food & Drink Shop	Fried Chicken Joint	French Restaurant	Food Truck
1	CENTRAL	Bar	Coffee Shop	Lounge	Ice Cream Shop	Gastropub	Burger Joint	Restaurant	Music Venue	Sushi Restaurant	Bookstore
2	DEVONSHIRE	Fish & Chips Shop	Gas Station	Sushi Restaurant	Fast Food Restaurant	Pizza Place	Park	Chinese Restaurant	Frozen Yogurt Shop	Mexican Restaurant	Donut Shop
3	FOOTHILL	Burger Joint	Fried Chicken Joint	Supermarket	Convenience Store	Sandwich Place	Food & Drink Shop	Frozen Yogurt Shop	French Restaurant	Food Truck	Food Court
4	HARBOR	Mexican Restaurant	Harbor / Marina	Convenience Store	Sandwich Place	Food Truck	Coffee Shop	Skate Park	Mobile Phone Shop	Pizza Place	Big Box Store
5	HOLLENBECK	Mexican Restaurant	Convenience Store	Food Truck	Taco Place	Grocery Store	Bakery	Japanese Restaurant	Light Rail Station	Pizza Place	Donut Shop
6	HOLLYWOOD	Coffee Shop	Pizza Place	Lounge	Vegetarian / Vegan Restaurant	Salon / Barbershop	Burger Joint	Park	Bar	Mexican Restaurant	Record Shop
7	MISSION	Fast Food Restaurant	Convenience Store	Auto Dealership	Sandwich Place	Coffee Shop	Food & Drink Shop	Frozen Yogurt Shop	Fried Chicken Joint	French Restaurant	Food Truck
8	NEWTON	Fast Food Restaurant	Café	Coffee Shop	Sandwich Place	Mexican Restaurant	Wings Joint	Fried Chicken Joint	French Restaurant	Food Truck	Food Court
9	NORTH HOLLYWOOD	Restaurant	Video Store	Pharmacy	Convenience Store	Tailor Shop	Wings Joint	Flower Shop	French Restaurant	Food Truck	Food Court
10	NORTHEAST	Gym / Fitness Center	Gym	Dance Studio	Martial Arts Dojo	Print Shop	Gift Shop	Furniture / Home Store	Construction & Landscaping	Paper / Office Supplies Store	Theater
11	OLYMPIC	Korean Restaurant	Fast Food Restaurant	Ice Cream Shop	Grocery Store	Diner	Pizza Place	Cosmetics Shop	Convenience Store	Sandwich Place	Coffee Shop
12	PACIFIC	Mexican Restaurant	Food Truck	Sandwich Place	Café	Bus Station	Massage Studio	Donut Shop	Coffee Shop	Food	Music Store
13	RAMPART	Fast Food Restaurant	Mexican Restaurant	Convenience Store	Sandwich Place	Coffee Shop	Liquor Store	Steakhouse	Rental Car Location	Food Truck	Chinese Restaurant
14	SOUTHEAST	Comedy Club	Food	Gym	Gym / Fitness Center	Construction & Landscaping	Fried Chicken Joint	French Restaurant	Food Truck	Food Court	Food & Drink Shop

# NEIGHBORHOOD CLUSTERING

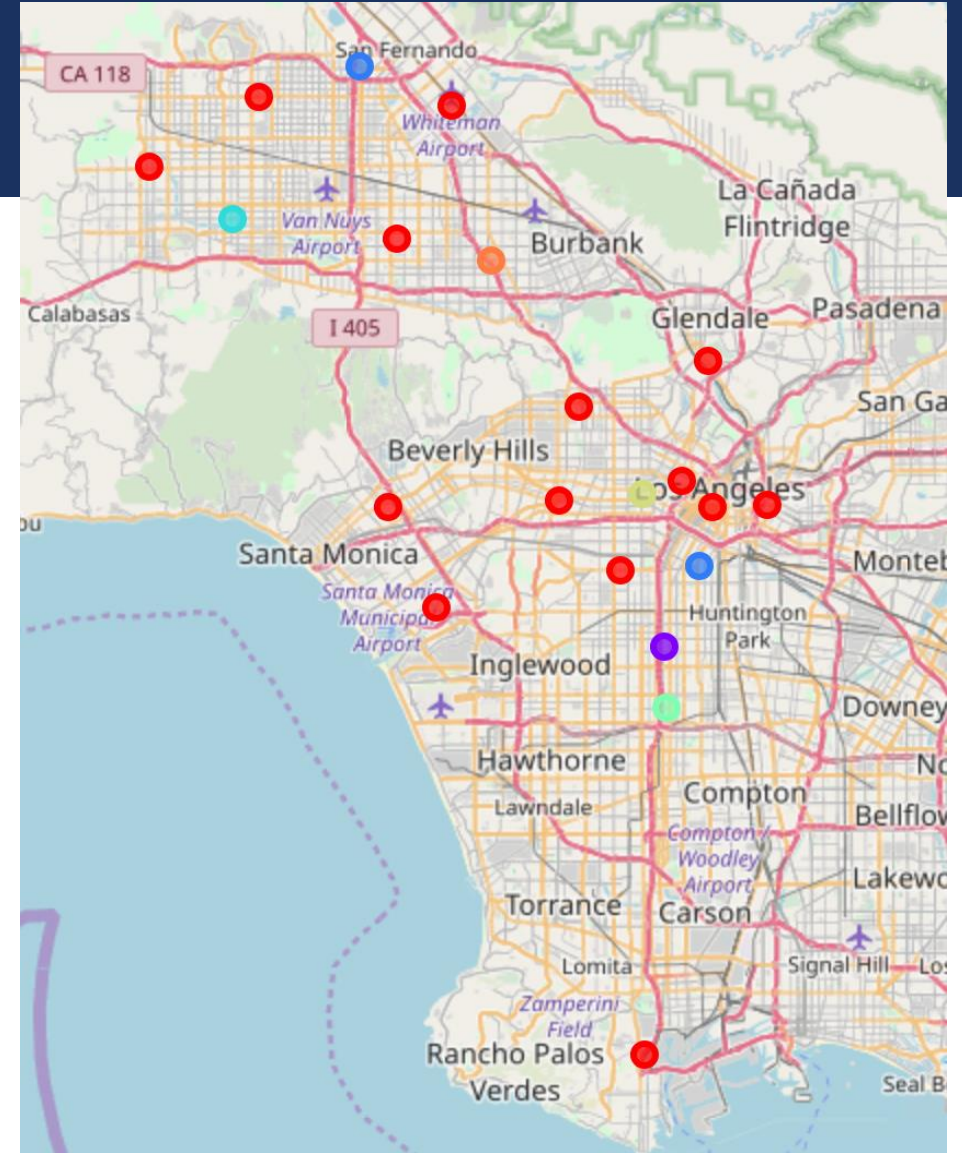
- Top 10 most common venues by police station neighborhood located in same cluster
- The majority of police stations are located in Cluster 0
- Data from Foursquare.com

	Neighborhood	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1	CENTRAL	0	Bar	Coffee Shop	Lounge	Ice Cream Shop	Gastropub	Burger Joint	Restaurant	Music Venue	Sushi Restaurant	Bookstore
2	DEVONSHIRE	0	Fish & Chips Shop	Gas Station	Sushi Restaurant	Fast Food Restaurant	Pizza Place	Park	Chinese Restaurant	Frozen Yogurt Shop	Mexican Restaurant	Donut Shop
3	FOOTHILL	0	Burger Joint	Fried Chicken Joint	Supermarket	Convenience Store	Sandwich Place	Food & Drink Shop	Frozen Yogurt Shop	French Restaurant	Food Truck	Food Court
4	HARBOR	0	Mexican Restaurant	Harbor / Marina	Convenience Store	Sandwich Place	Food Truck	Coffee Shop	Skate Park	Mobile Phone Shop	Pizza Place	Big Box Store
5	HOLLENBECK	0	Mexican Restaurant	Convenience Store	Food Truck	Taco Place	Grocery Store	Bakery	Japanese Restaurant	Light Rail Station	Pizza Place	Donut Shop
6	HOLLYWOOD	0	Coffee Shop	Pizza Place	Lounge	Vegetarian / Vegan Restaurant	Salon / Barbershop	Burger Joint	Park	Bar	Mexican Restaurant	Record Shop
10	NORTHEAST	0	Gym / Fitness Center	Gym	Dance Studio	Martial Arts Dojo	Print Shop	Gift Shop	Furniture / Home Store	Construction & Landscaping	Paper / Office Supplies Store	Theater
12	PACIFIC	0	Mexican Restaurant	Food Truck	Sandwich Place	Café	Bus Station	Massage Studio	Donut Shop	Coffee Shop	Food	Music Store
13	RAMPART	0	Fast Food Restaurant	Mexican Restaurant	Convenience Store	Sandwich Place	Coffee Shop	Liquor Store	Steakhouse	Rental Car Location	Food Truck	Chinese Restaurant
15	SOUTHWEST	0	Fast Food Restaurant	Southern / Soul Food Restaurant	Spanish Restaurant	Donut Shop	Currency Exchange	Cosmetics Shop	Road	Sandwich Place	Seafood Restaurant	Chinese Restaurant
16	TOPANGA	0	Mexican Restaurant	Thrift / Vintage Store	Breakfast Spot	Pizza Place	Chinese Restaurant	Strip Club	Supermarket	Convenience Store	Soccer Field	Hobby Shop
17	VAN NUYS	0	Convenience Store	Chinese Restaurant	Mobile Phone Shop	Pizza Place	Mexican Restaurant	Shipping Store	Sandwich Place	Food	Skating Rink	Bank
18	WEST LOS ANGELES	0	Mexican Restaurant	Sushi Restaurant	Japanese Restaurant	Indie Movie Theater	Middle Eastern Restaurant	Pharmacy	Shoe Store	Café	Cocktail Bar	Sake Bar
20	WILSHIRE	0	American Restaurant	Coffee Shop	Mexican Restaurant	Wings Joint	Donut Shop	Shipping Store	Sandwich Place	Comedy Club	Convenience Store	Dessert Shop



# POLICE STATION NEIGHBORHOODS MAPPED BY SIMILARITY

- Police station neighborhoods colored by similarity based on nearby venues
- Using one hot encoding and k-means clustering to determine amount of similarity



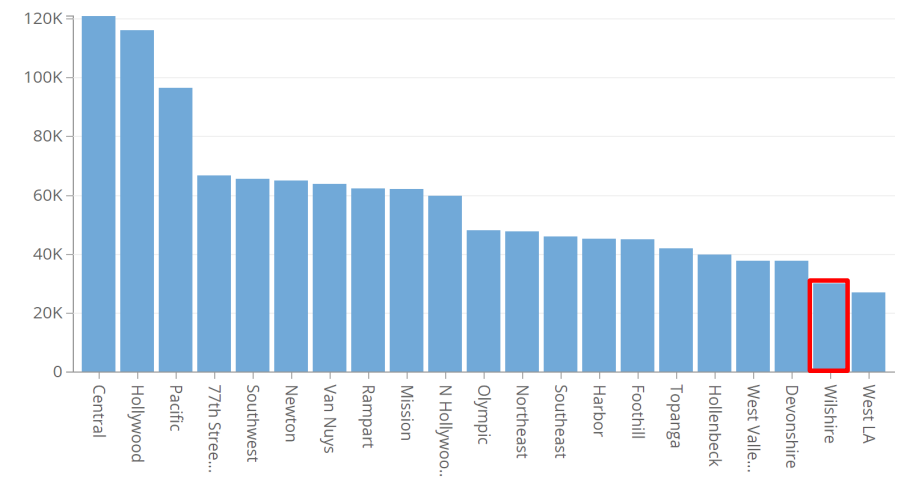


# COFFEE & DONUT SHOP STATISTICS

- The highest number and best rated coffee shops are located in Central and Hollywood neighborhoods.
- Central and Hollywood also have the highest arrests.
- Based on low arrests and number and average rating of nearby coffee & donut shops, WILSHIRE is the “best” police station neighborhood.

Count	
Neighborhood	
CENTRAL	4
DEVONSHIRE	1
HARBOR	2
HOLLENBECK	1
HOLLYWOOD	5
MISSION	1
NEWTON	1
NORTHEAST	1
OLYMPIC	1
PACIFIC	2
RAMPART	2
SOUTHWEST	1
WILSHIRE	3

Coffee/Donut Shops Avg Rating	
Neighborhood	
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OLYMPIC	7.20
PACIFIC	0.00
RAMPART	7.45
SOUTHWEST	0.00
WILSHIRE	7.20



# REFERENCES

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