

ROBBERY RATES INGLEWOOD CALIFORNIA AREA



AGENDA

01

Summary

02

Explore

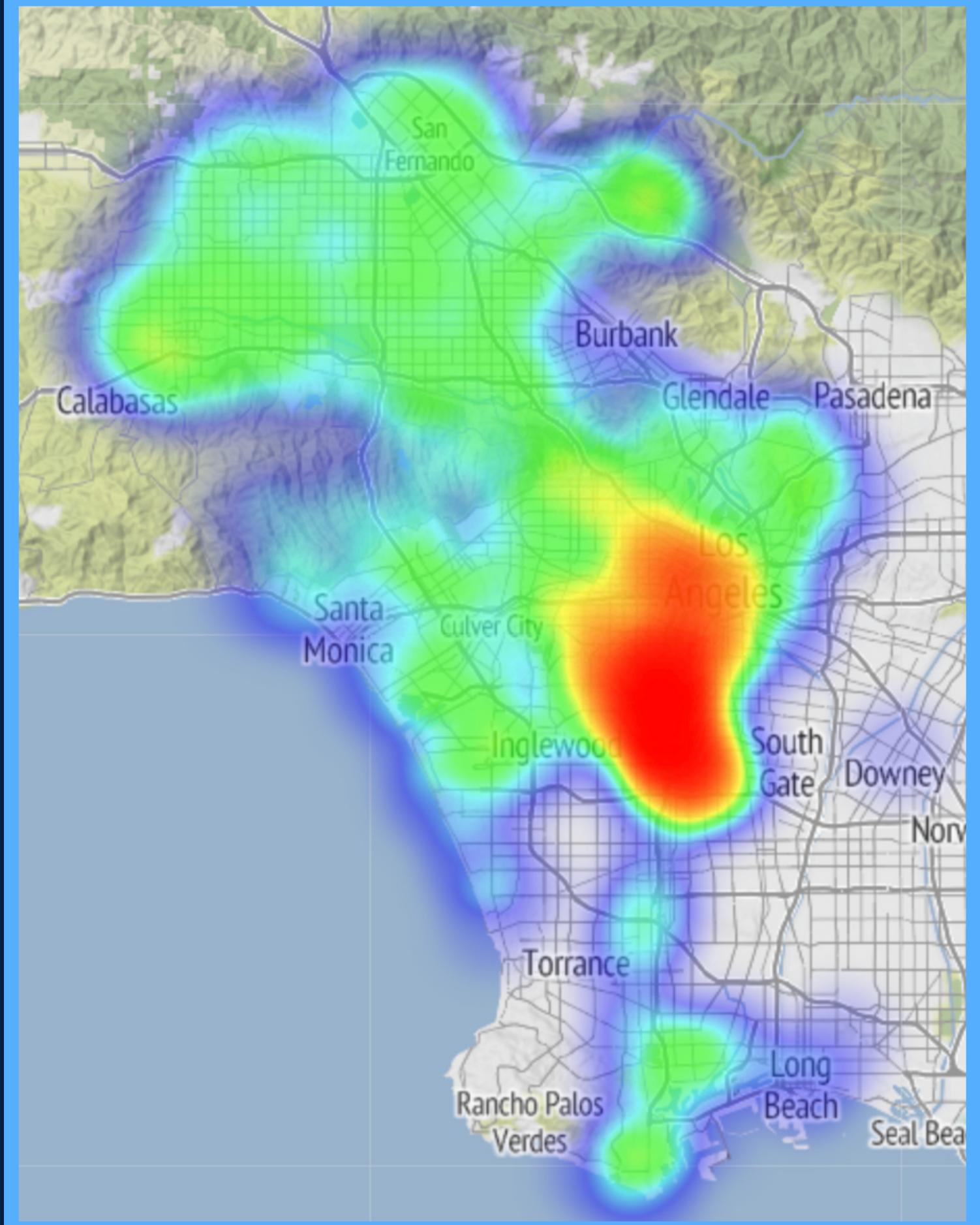
03

Findings

04

Proposal

Explore areas of high armed robbery in cluster 4
and how you can reduce your robbery odds.



Increase awareness about
armed robbery clusters

Objectives

Big Idea

Findings

Proposal

Increase awareness about
armed robbery clusters

Objectives

Big Idea

Findings

Proposal

53%

Baseline

60%

Logistic Regression

Increase awareness about
armed robbery clusters

Armed
Robberies
Inglewood
Area

Armed
Robberies
Rest of LA

50%



27%



Objectives

Big Idea

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53%

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Armed
Robberies
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Armed
Robberies
Rest of LA

50%


27%


Objectives

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53%

Baseline

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Logistic Regression

Raise Awareness

WHO?
WHEN?
WHERE?

PLAN & ACQUIRE

PREPARE
EXPLORE
MODEL
DELIVER

data.lacity.org

2010 to 2019
(2.1 million)

2020 to Now
(800 thousand)

Self Hosted
Combined CSV
2.9 million crimes
28 features

Modeling Set
1.2 thousand crimes
5 features

PLAN & ACQUIRE

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is_robbery
Target Variable

PLAN & ACQUIRE

PREPARE
EXPLORE
MODEL
DELIVER

data.lacity.org

2010 to 2019
(2.1 million)

2020 to Now
(800 thousand)

is_robbery
Target Variable

Combined CSV
Self Hosted
2.9 million crimes
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Modeling Set
1.2 thousand crimes
5 features

victim_age
time_of_day
is_street
victim_sex
victim_descent
Features

PREPARE

CLUSTERING

K-DISTANCE GRAPH

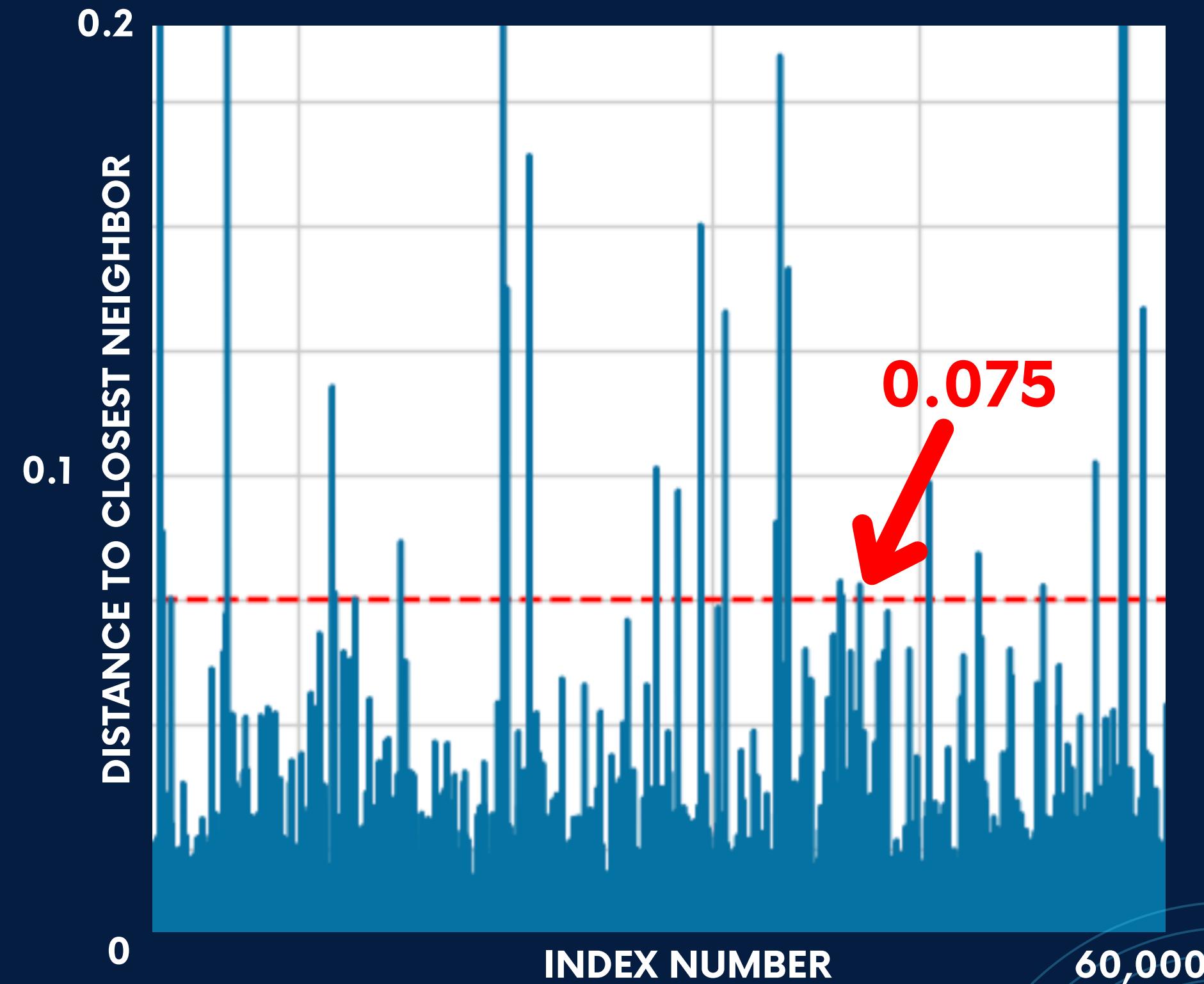
Gun Crimes Only

Latitude & Longitude
StandardScaler

K-Distance for EPS Score

Cluster 4
(Inglewood Area)

Eventually, look into other clusters



PREPARE

CLUSTERING

VISUALIZING

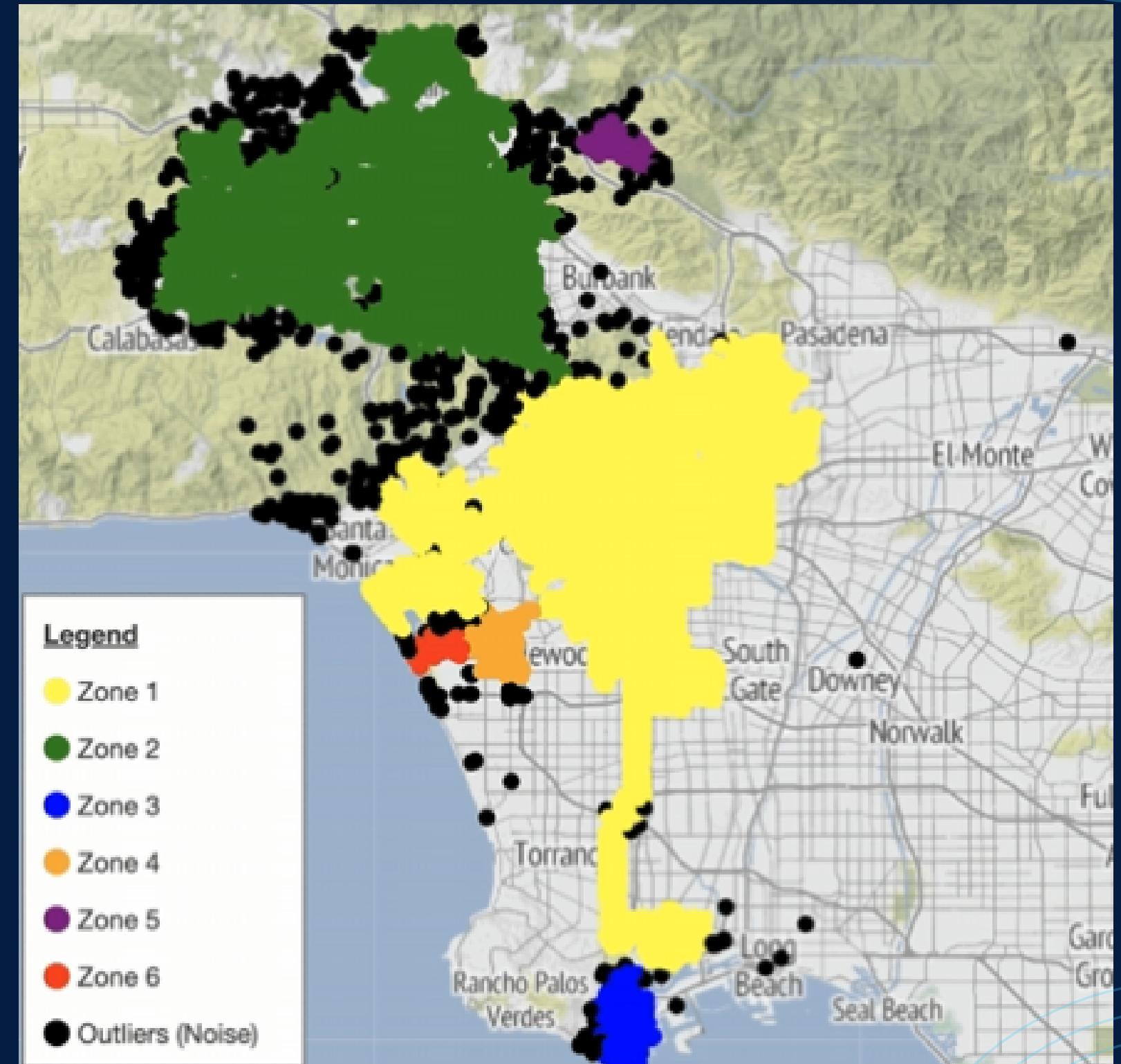
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PREPARE

CLUSTERING

VISUALIZING

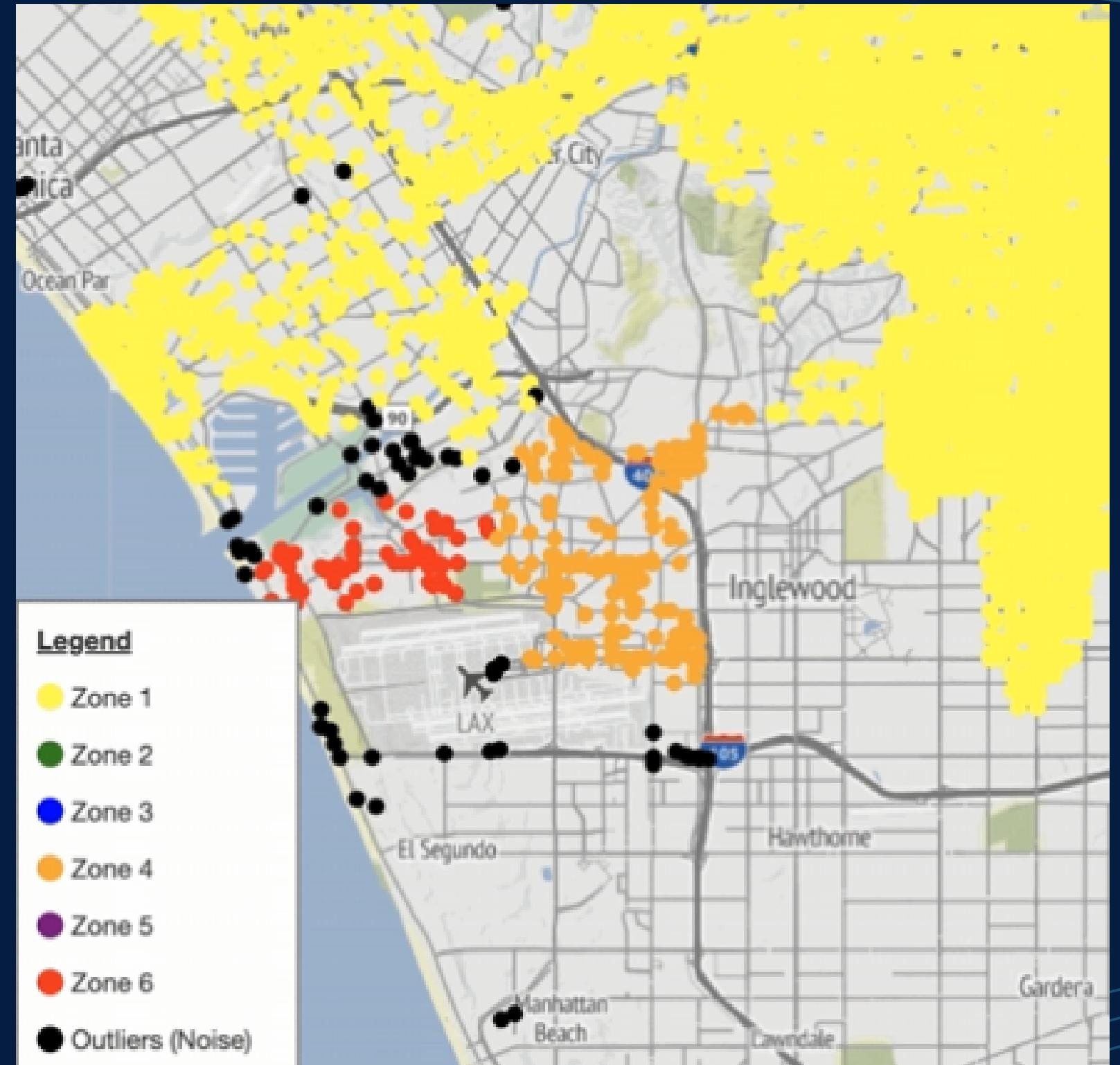
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(Inglewood Area)

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ROBBERIES BY TIME OF DAY

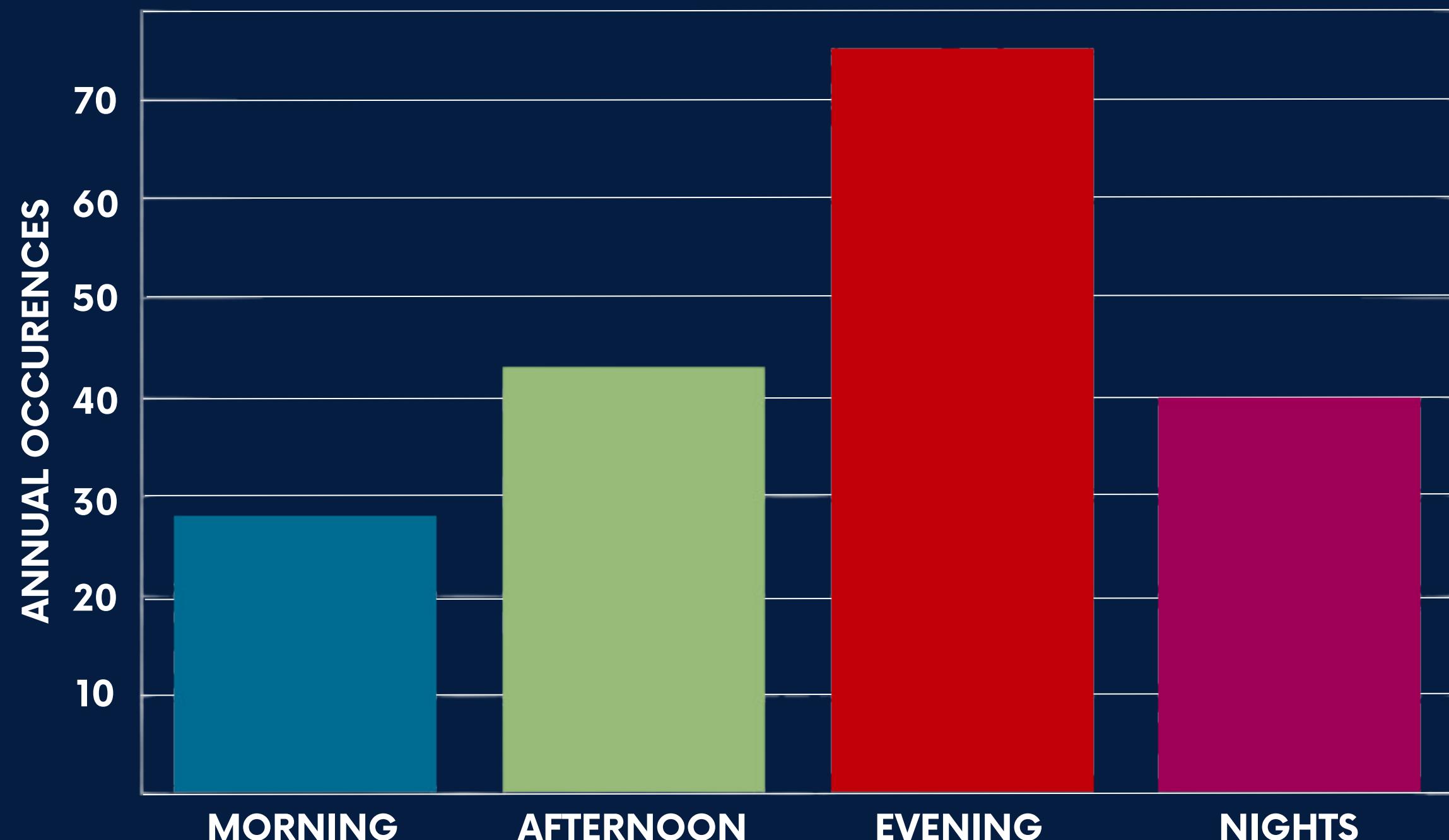
(AVERAGE ANNUAL)

Evening
(6 PM to 12 AM)

Nights
(12 AM to 6 AM)

Evening
compared
to other times
individually

(statistically significant with χ^2)



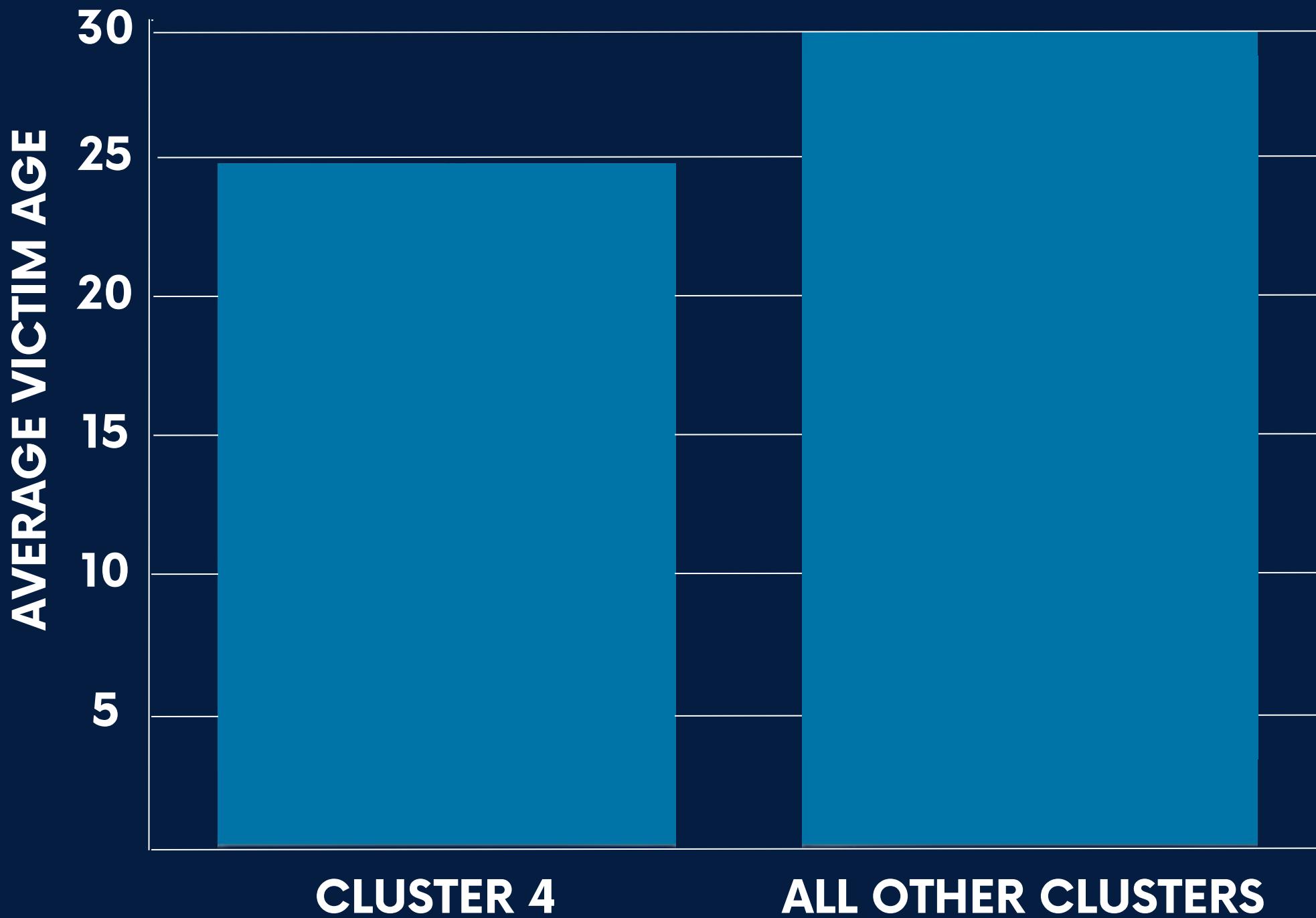
EXPLORE

Cluster 4
24.8

All Others
29.2

Statistically significant with T-testing

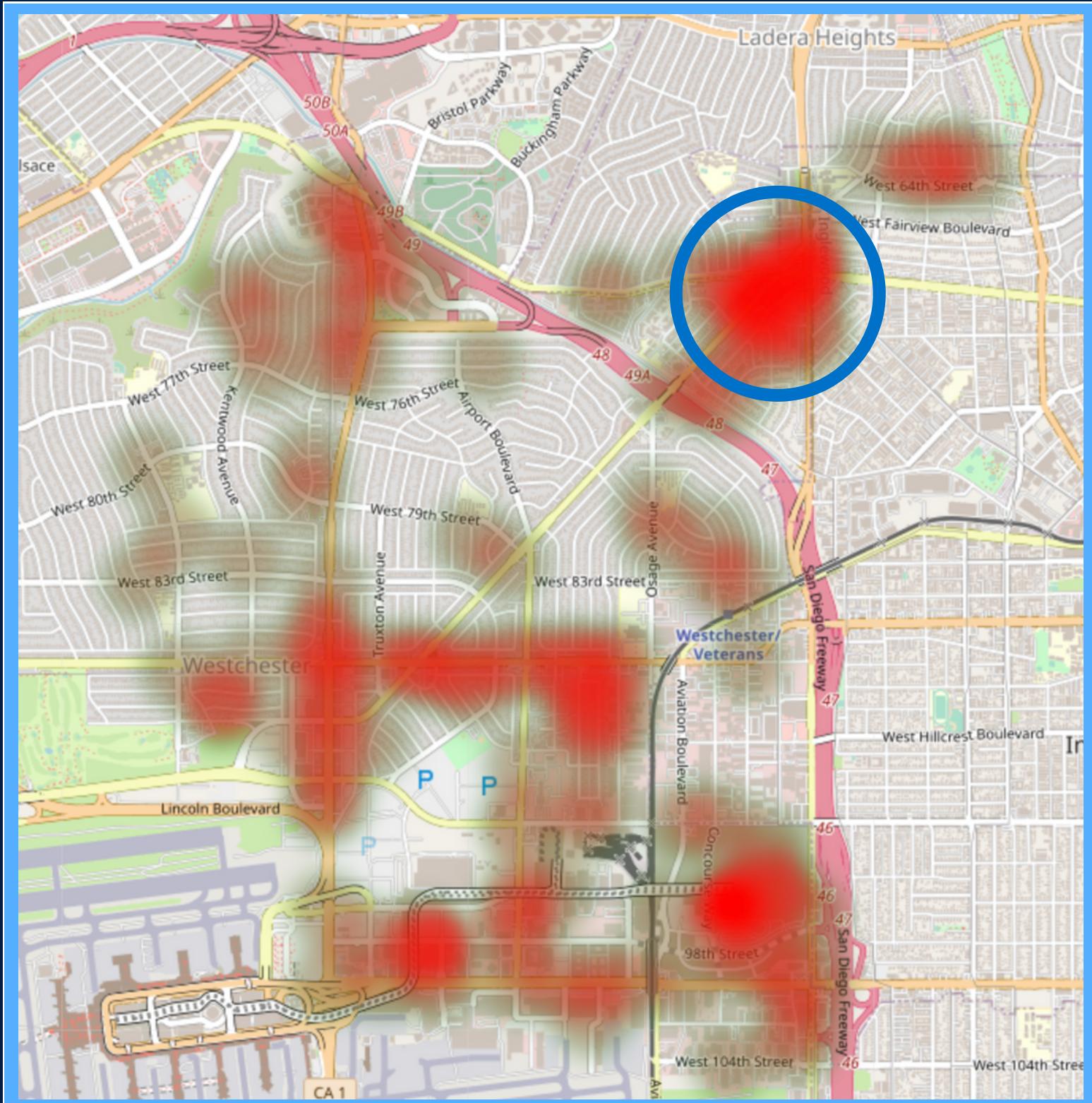
AVERAGE VICTIM AGE BY CLUSTERS



Latitude Longitude

Premise Description (Categorical)

LOCATION OF CRIMES IN CLUSTER 4



CLUSTER 4 ARMED ROBBERY HEATMAP

LOCATION OF CRIMES IN CLUSTER 4

(Latitude, Longitude, Premise Drescription)

**Street
Sidewalk
Parking Lot**
(premise description)

**Fast Food
Gas Stations**
(premise description)



~~time_of_day~~
~~victim_age~~
is_street
victim_sex
victim_descent
(binary features)

Logistic Regression (best model)

```
C=10,  
max_iter=1000  
penalty="l1"  
solver="saga"  
random_state=321
```

53%
(baseline)

58%
(train)

62%
(validate)

60%
(test)

Logistic Regression (best model)

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Suspect

Case Decisions

Poverty Levels

Population Data

Housing

Logistic Regression (best model)

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(test)

Suspect

Case Decisions

Poverty Levels

Population Data

Housing

DELIVER

HELPFUL MEASURES

WHERE?

Fast Food
STREETS

Housing

WHO?

Young as 7
25
Old as 73

WHEN?

Early Morning
NIGHT
Evening





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LinkedIn: /zschmitz

