Eugene and Springfield Demographics

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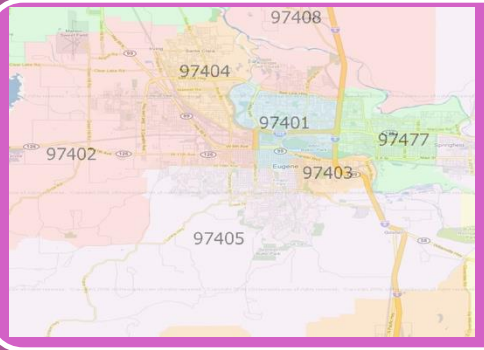
ADS4SJ

Background

CAHOOTS (Crisis Assistance Helping Out On The Streets)



CAHOOTS calls from 11 different zip codes

Four different demographic groups: age, income, education, and race.

Research Questions

What populations is CAHOOTS serving?

How do these populations differ between Eugene and Springfield?

Data

Call Data		
Call_Zipcode	**Responding_Unit**	**Call_City**
97401	cahoots	Eugene
97477	cahoots	Springfield

Data

Demographic Data		
Income table example	**97401**	**97402**
Less than $10,000	2435	1374
$10,000 to $14,999	1481	1273

Methods

What populations is CAHOOTS serving?

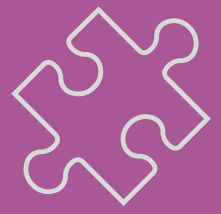
Call volume by zip code

Calls per 1000 people

Variable correlations

Create call volume quartiles and calculate averages

Methods



How do these populations differ between Eugene and Springfield?

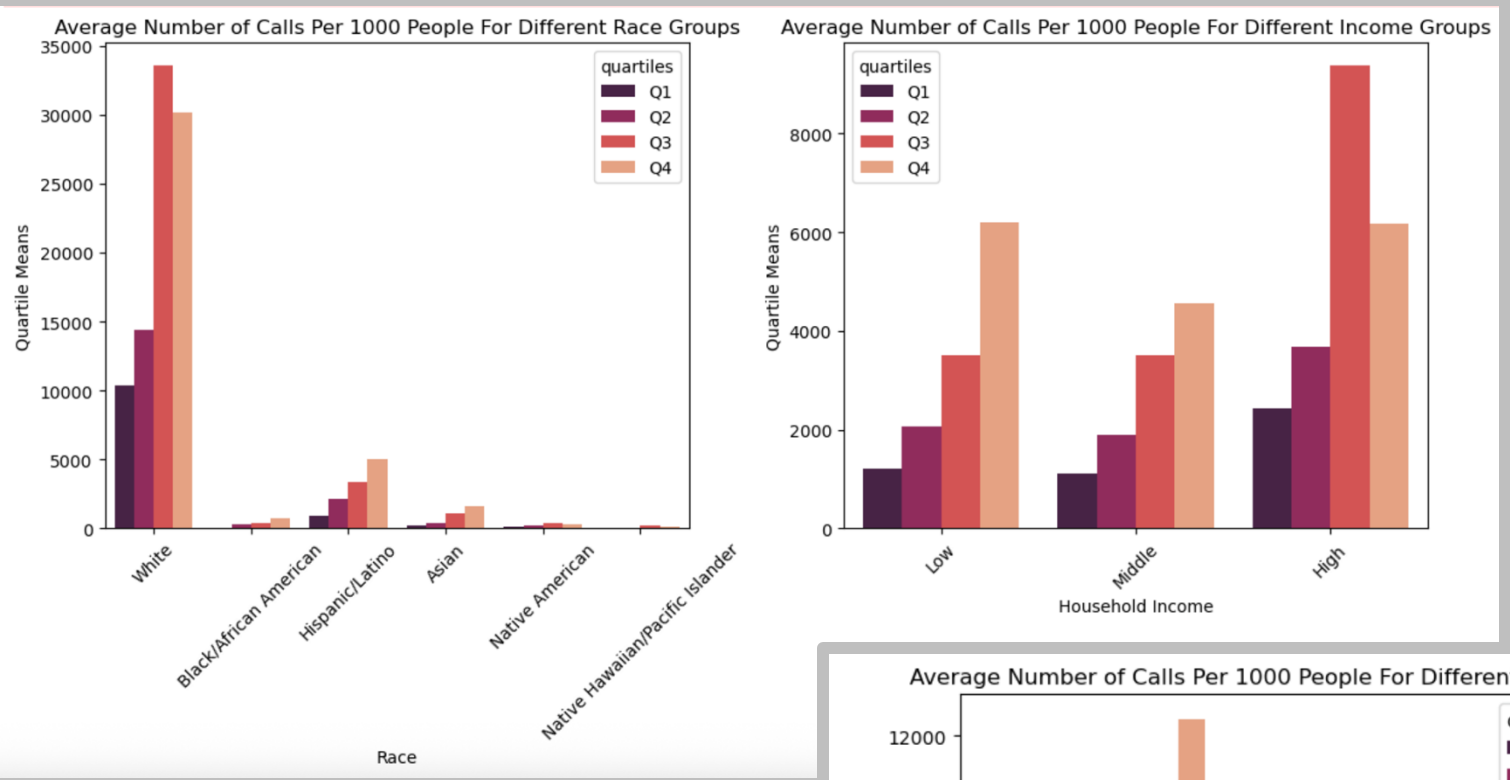
Call volume by zip code

Calls per 1000 people

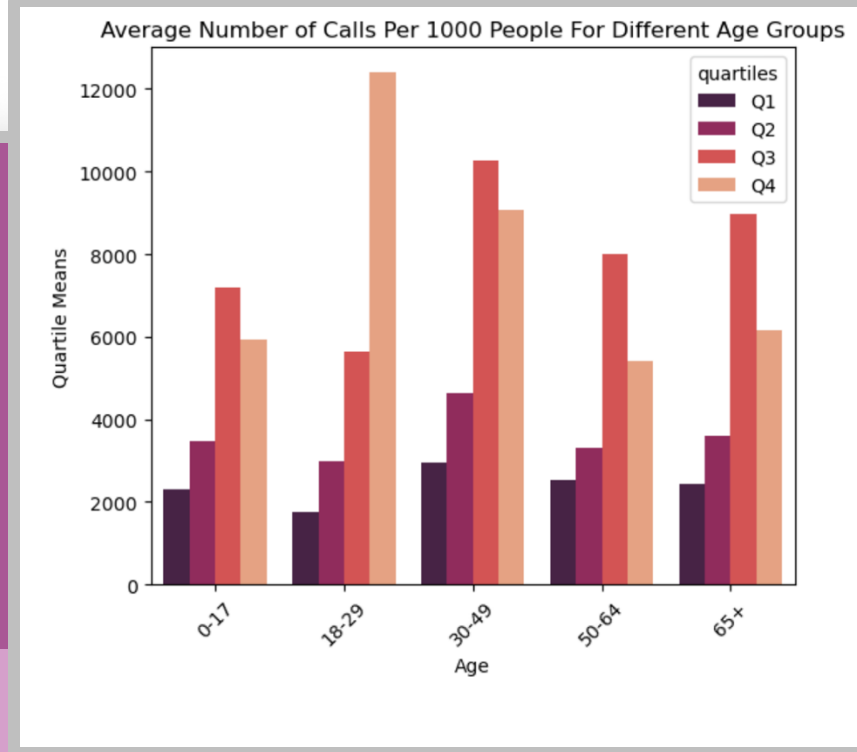
Classify entries by city function

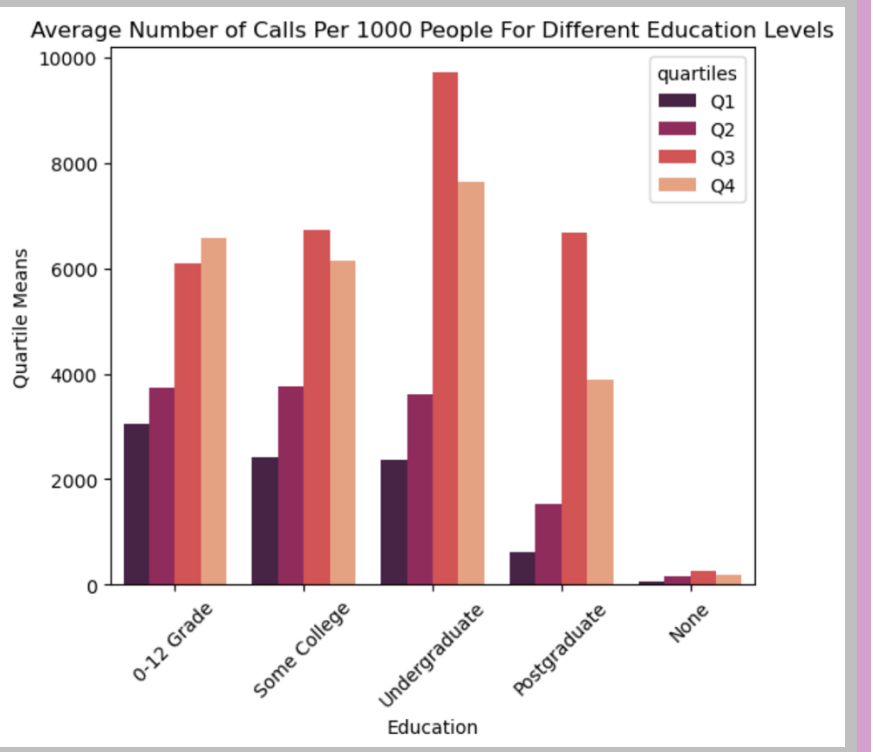
Chi squared test function

Results

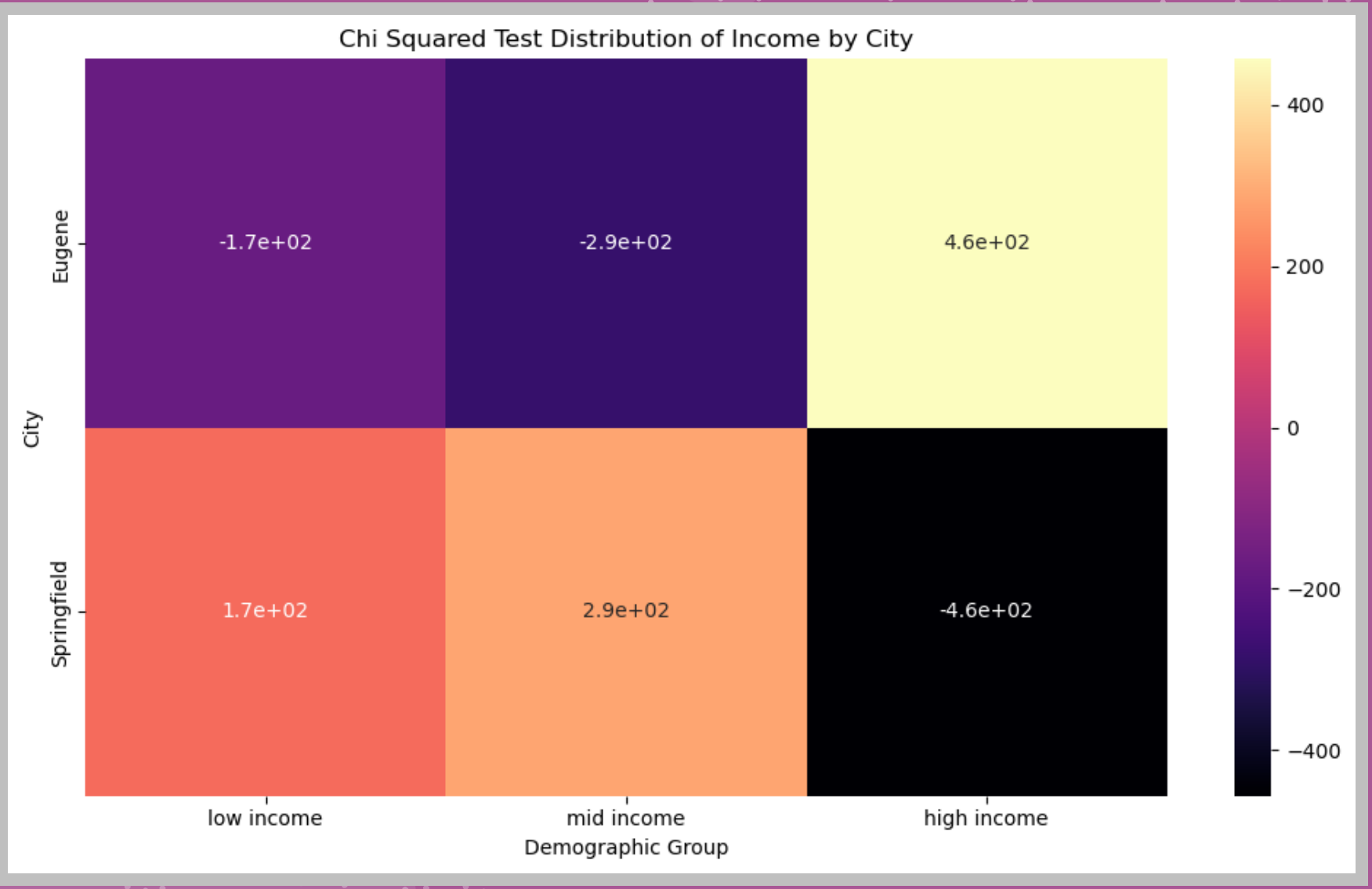

Average Number of Calls Per 1000 People For Different Race Groups
quartiles
Q1
Q2
Q3
Q4
Quartile Means
35000
30000
25000
20000
15000
10000
5000
0
White
Black/African American
Hispanic/Latino
Asian
Native American
Native Hawaiian/Pacific Islander
Race

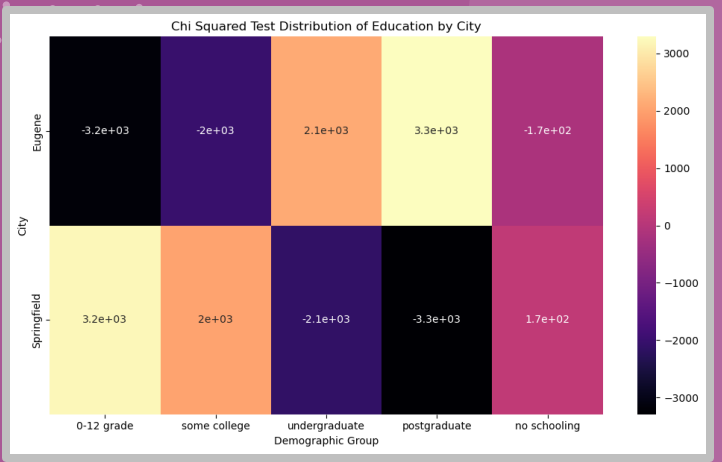
Average Number of Calls Per 1000 People For Different Income Groups
quartiles
Q1
Q2
Q3
Q4
Quartile Means
8000
6000
4000
2000
0
Low
Middle
High
Household Income

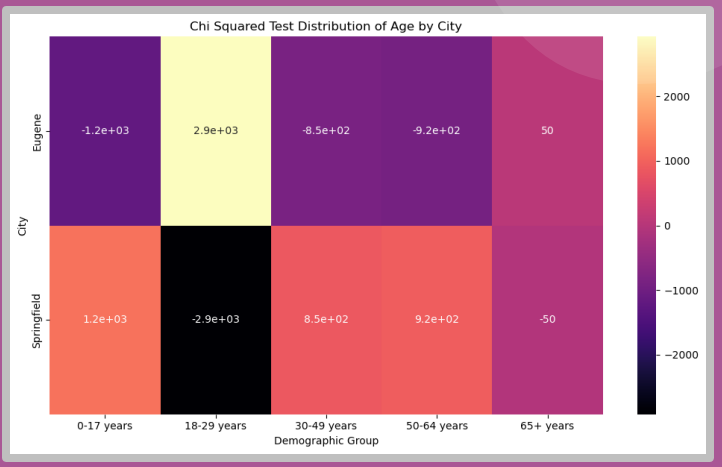

Average Number of Calls Per 1000 People For Different Age Groups
quartiles
Q1
Q2
Q3
Q4
Quartile Means
12000
10000
8000
6000
4000
2000
0
0-17
18-29
30-49
50-64
65+
Age

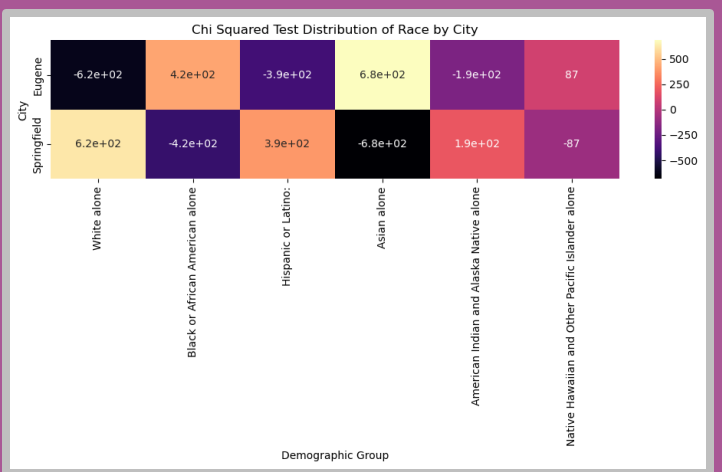

Average Number of Calls Per 1000 People For Different Education Levels
quartiles
Q1
Q2
Q3
Q4
Quartile Means
10000
8000
6000
4000
2000
0
0-12 Grade
Some College
Undergraduate
Postgraduate
None
Education

Results


Chi Squared Test Distribution of Income by City
Eugene
Springfield
City
-1.7e+02
-2.9e+02
4.6e+02
1.7e+02
2.9e+02
-4.6e+02
low income
mid income
high income
Demographic Group
400
200
0
−200
−400


Chi Squared Test Distribution of Education by City
Eugene
Springfield
City
-3.2e+03
-2e+03
2.1e+03
3.3e+03
-1.7e+02
3.2e+03
2e+03
-2.1e+03
-3.3e+03
1.7e+02
0-12 grade
some college
undergraduate
postgraduate
no schooling
Demographic Group
3000
2000
1000
0
−1000
−2000
−3000


Chi Squared Test Distribution of Age by City
Eugene
Springfield
City
-1.2e+03
2.9e+03
-8.5e+02
-9.2e+02
50
1.2e+03
-2.9e+03
8.5e+02
9.2e+02
-50
0-17 years
18-29 years
30-49 years
50-64 years
65+ years
Demographic Group
2000
1000
0
−1000
−2000


Chi Squared Test Distribution of Race by City
Eugene
Springfield
City
-6.2e+02
4.2e+02
-3.9e+02
6.8e+02
-1.9e+02
87
6.2e+02
-4.2e+02
3.9e+02
-6.8e+02
1.9e+02
-87
White alone
Black or African American alone
Hispanic or Latino:
Asian alone
American Indian and Alaska Native alone
Native Hawaiian and Other Pacific Islander alone
Demographic Group
500
250
0
−250
−500

Discussion

18-29 age group has the highest call rate in high-call areas and Q4 is relatively consistent across all demographics

Many demographic groups are severely underrepresented in both Eugene and Springfield.

Call type and demographics?

There are more zip codes for Eugene than Springfield

Demographic data is not directly related to call data

Acknowledgments

CAHOOTS

Rori Rohlfs
&
Eli

ADS4SJ
Team