

GEOGRAPHICAL ACCESS TO HEALTHCARE RESOURCES AND LIFE EXPECTANCY IN LOS ANGELES CALIFORNIA

OUTLINE

- Introduction
- Data & Analytical Plan
- Results
- Discussion & Conclusions

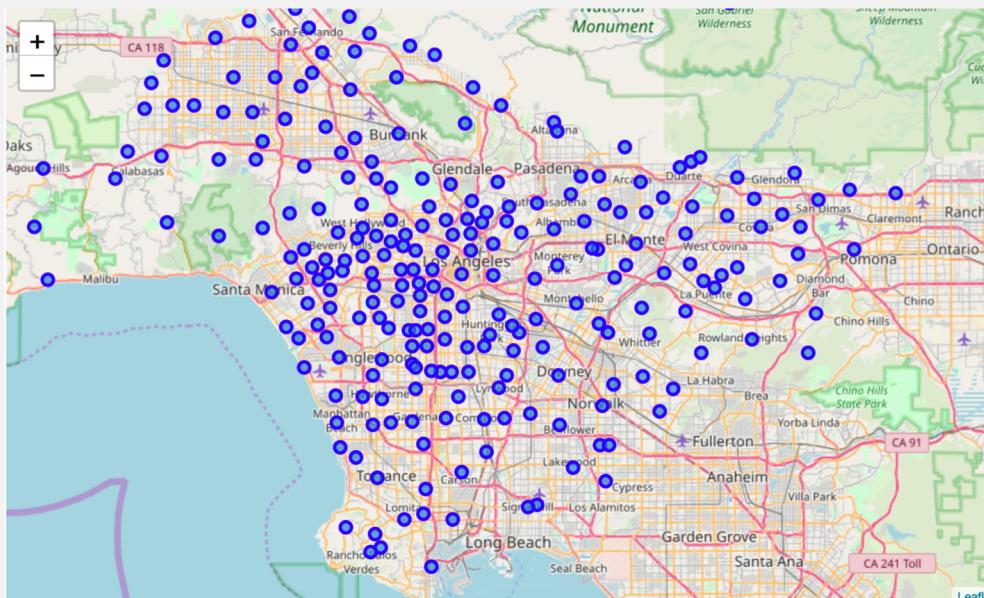
INTRODUCTION

- Access to healthcare such as physician clinics and hospitals remains a significant problem for low-income or predominately immigrant communities in the United States
- It is unclear how this infrastructure correlates to health outcomes such as life expectancy in a community
- To address this knowledge gap, this project uses Foursquare business and CDC data to list and map healthcare facilities and life expectancy in years for each neighborhood in the Los Angeles area

DATA & ANALYTICAL PLAN

- Neighborhood data for Los Angeles including name and geospatial (latitude and longitude) coordinates are provided by the University of Southern California Price Center for Social Innovation's Neighborhood Data for Social Change (NDSC) platform
- Business type and location data for each neighborhood are available from the Foursquare Places API. All healthcare-related businesses that are classified by Foursquare as a "Medical Center" venue category were mapped using Folium
- Life expectancy data are provided by the Centers for Disease Control and Prevention's National Center for Health Statistics
- K-means cluster analysis was used to cluster healthcare facilities and life expectancy in the LA metro area

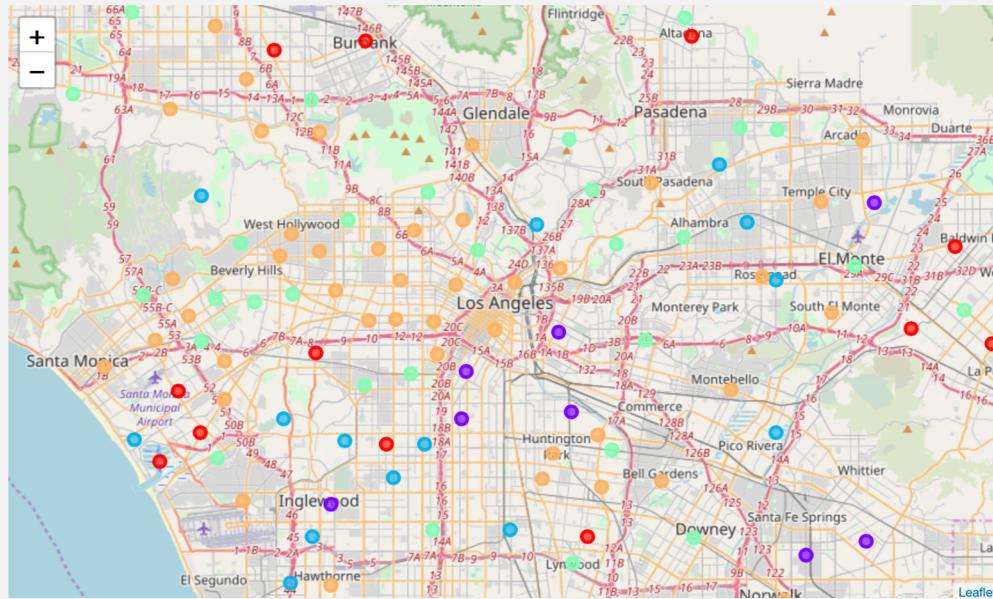
LOCATIONS OF EACH NEIGHBORHOOD IN LOS ANGELES



TYPES OF HEALTHCARE FACILITIES

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue
0	Agoura Hills	Dentist's Office	Alternative Healer	Yoga Studio
1	Alhambra	Doctor's Office	Emergency Room	Yoga Studio
2	Altadena	Doctor's Office	Yoga Studio	Marijuana Dispensary
3	Arcadia	Doctor's Office	Dentist's Office	Medical Center
4	Arleta	Medical Center	Yoga Studio	Marijuana Dispensary

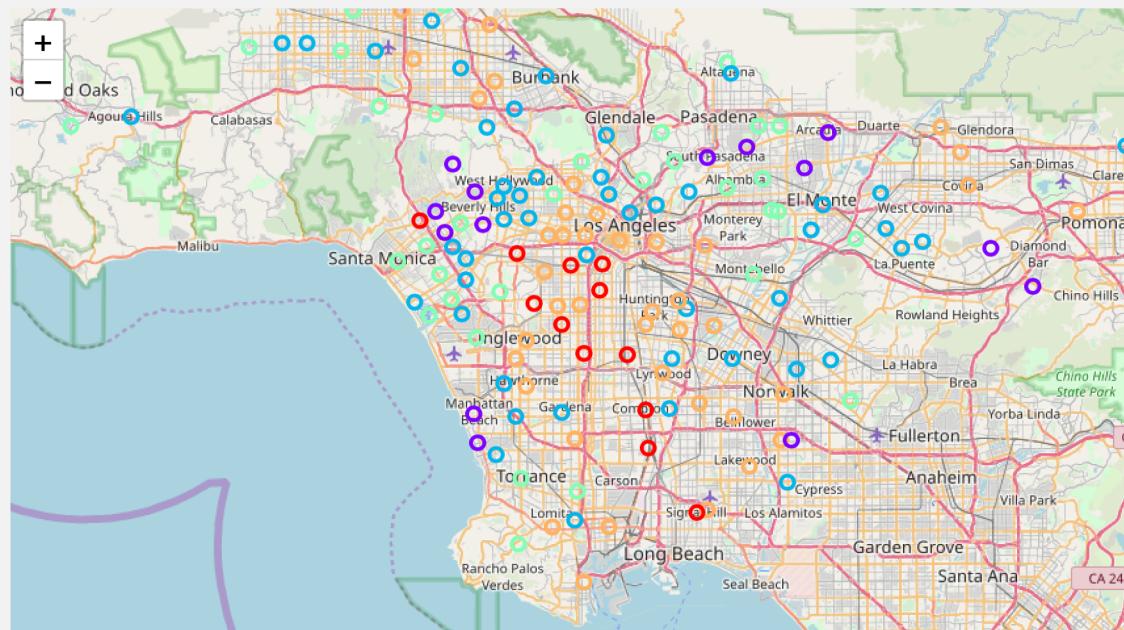
K-MEANS CLUSTERING OF HEALTHCARE CENTER TYPES



AVERAGE LIFE EXPECTANCY FOR SELECTED NEIGHBORHOODS

	neighborhood	e(0)
0	Acton	76.400000
1	Adams-Normandie	79.300000
2	Agoura Hills	81.766667
3	Agua Dulce	76.700000
4	Alhambra	82.820000

K-MEANS CLUSTERING OF AVERAGE LIFE EXPECTANCY BY NEIGHBORHOOD



SUMMARY STATISTICS FOR BEVERLY HILLS

Grouped LE	Very high LE
level_0	20
index	29
long	-118.4
lat	34.0825
Cluster Labels	3
1st Most Common Venue	Acupuncturist
2nd Most Common Venue	Doctor's Office
3rd Most Common Venue	Urgent Care Center
4th Most Common Venue	Alternative Healer
5th Most Common Venue	Assisted Living
Cluster Labels LE	1
e(0)	85.8333

SUMMARY STATISTICS FOR INGLEWOOD

Grouped LE	Low LE
level_0	69
index	117
long	-118.346
lat	33.9541
Cluster Labels	1
1st Most Common Venue	Hospital
2nd Most Common Venue	Medical Center
3rd Most Common Venue	Dentist's Office
4th Most Common Venue	Doctor's Office
5th Most Common Venue	Emergency Room
Cluster Labels LE	4
e(0)	78.5778

DISCUSSION & CONCLUSIONS

- K-means clustering analysis indicates a wide range of dispersion in type and number of healthcare facilities as well as life expectancy throughout the LA metro area
- A comparison of Beverly Hills with Inglewood (located 30 minutes away) indicated a 7 year difference in life expectancies
- The US has long-standing barriers in access to care faced by low socioeconomic status neighborhoods, resulting in substantial variation in life expectancy within small geographical areas.
- The findings highlight the critical need for public health and healthcare resources in traditionally underserved and disadvantaged communities within LA

REFERENCES

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