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# Living Landscapes

## REIMAGINING THE ROLE PARKS PLAY IN COMMUNITIES

### 1. Occurrences & Characteristics of Park-Based Encampments

UP 206A Midreview, Rayne Laborde

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# 1.1 Framing

As Los Angeles grapples with a homelessness crisis and the growing upheaval wrought by the COVID-19 pandemic, public parks are a clear site of contestation. **A communal site of leisure, protest, play, and, increasingly, of living, parks showcase a cross-section of the complicated relationships that mold our urban lives.** This tension is especially prevalent in relationships between housed and unhoused individuals, particularly as this translates to **perceptions of safety, sanitation, and comfort.** This project questions how re-imagining the role parks play in communities may become an opportunity to **provide increased access to services for both housed and unhoused neighbors, and questions if accepting and supporting the necessary presence of encampments can lead to positive reform of park use and perception.** Most crucially, the work questions tendencies to divorce issues of unhoused living (dwelling) from housed living (visiting) in the park setting, and instead asks how the needs of all park users may be met, while promoting safety, compassion, and **dignity.**

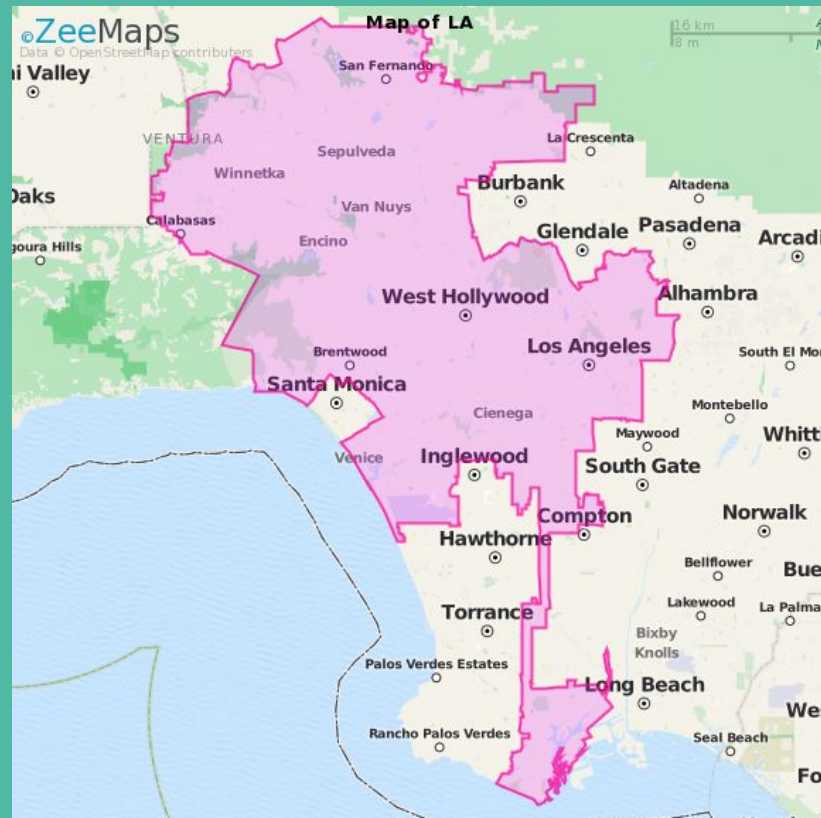


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Echo Park Lake Encampment, Barry Lank

# 1.1 Framing

- Understand where park-based encampments are reported
- Typologize Parks
  - Size
  - Number of Encampment Reports
  - Resources
  - Surrounding Characteristics
- Interpolating where services could be most impactful



City of Los Angeles outline

# 1.2 Definitions

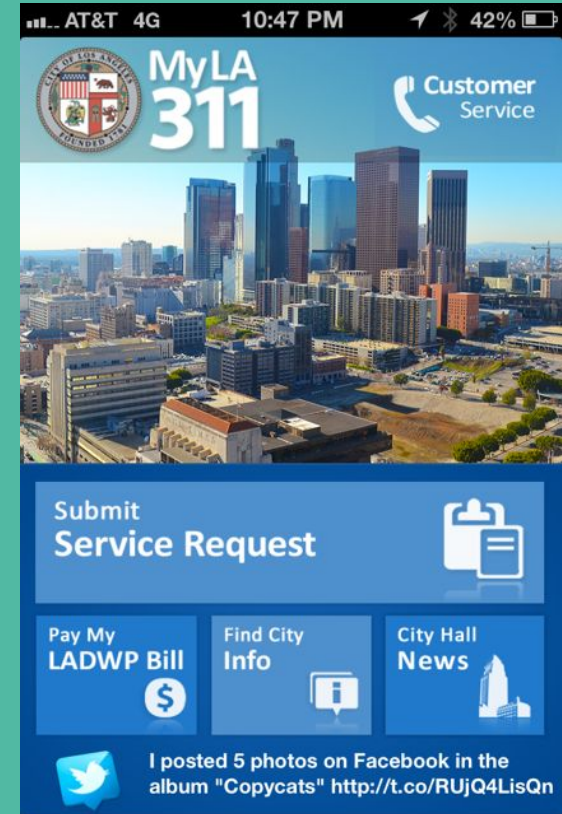
**Encampment:** A self-organized community of unhoused individuals who reside in tents or under tarps. This term references the use of equipment designed for camping outdoors.

1

**Los Angeles 311:** A call center for non-emergency City services

**Homeless Encampment Service Request:** When reporting through 311, “Homeless Encampment” is under “Public Right of Way Investigation.” This study reclassifies these “requests” as **Encampment Reports**.

**Park Amenities:** Permanent or semi-permanent park services, such as restrooms, water fountains, a picnic area with outdoor cooking, and/or gyms which may include showers.

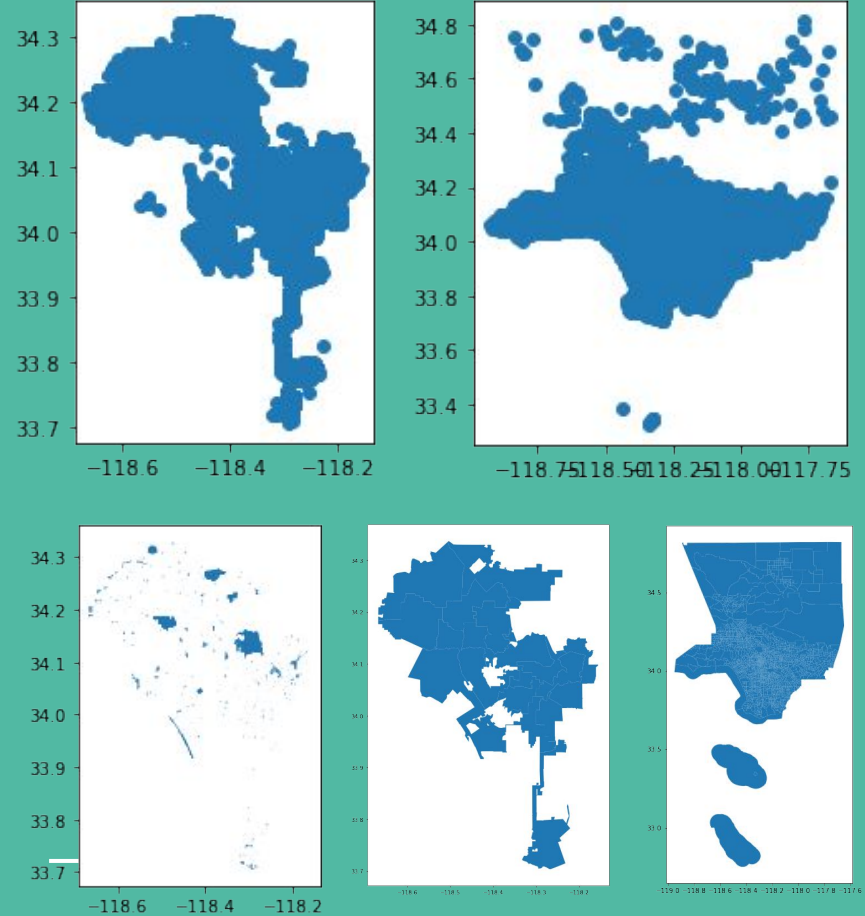


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1 Hilary Malson, “For the Crisis Yet to Come,” *Institute on Inequality and Democracy*, 2002.

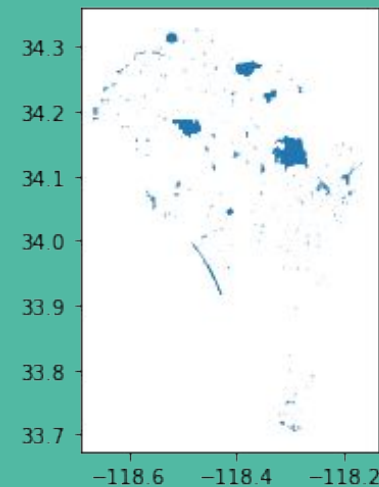
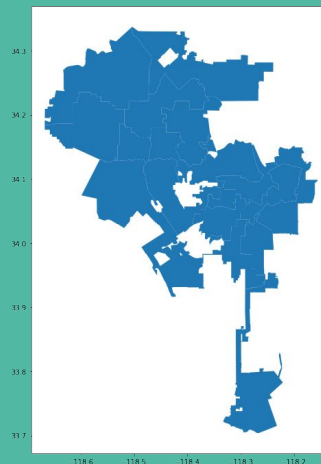
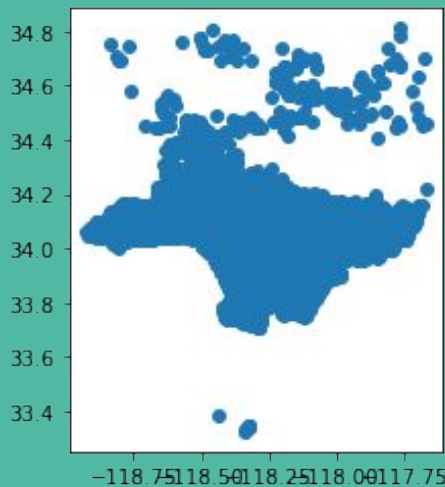
# 1.3 Datasets

1. Encampment “Service Requests” / Reports via 311 Calls
2. Park Amenities in LA County
3. City of LA Parks Shapefile
4. City of LA Council District Shapefile
5. Census Tracts Shapefile



# Join

*County-wide Park Amenities with City of LA Council Districts, and with City-wide Parks*



```
g_resources = gpd.GeoDataFrame(  
    resources, geometry=gpd.points_from_xy(resources.center_long, resources.center_lat))  
resources.plot()  
resources=resources.set_crs("EPSG:4326")  
resources.crs
```

```
#then use a spatial join to just get the r  
la_resources = gpd.sjoin(resources, city)  
la_resources.plot()
```

# 557

## *Parks in Los Angeles*

**Park Node** 1/4 acre or less

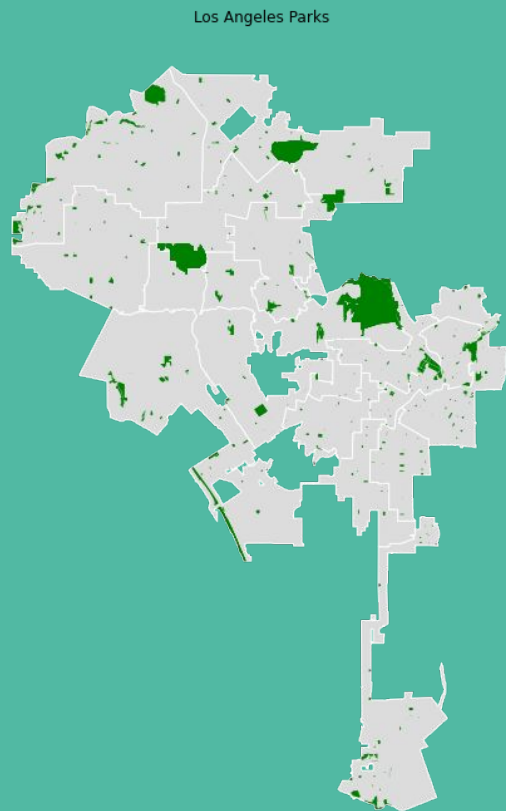
**Pocket Park** less than 3 acres

**Neighborhood Park** 3 - 10 acres

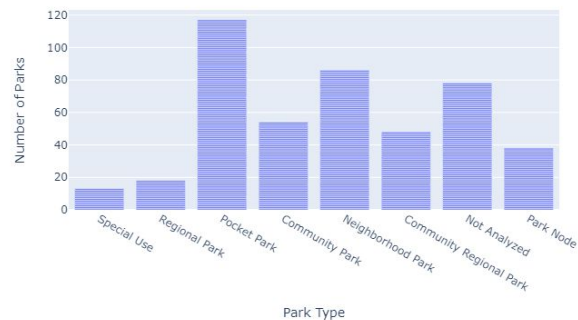
**Community Park** 10 - 20 acres

**Regional Park** 10-20 acres

**Community Regional Park** 20-100 acres



Los Angeles Park Types



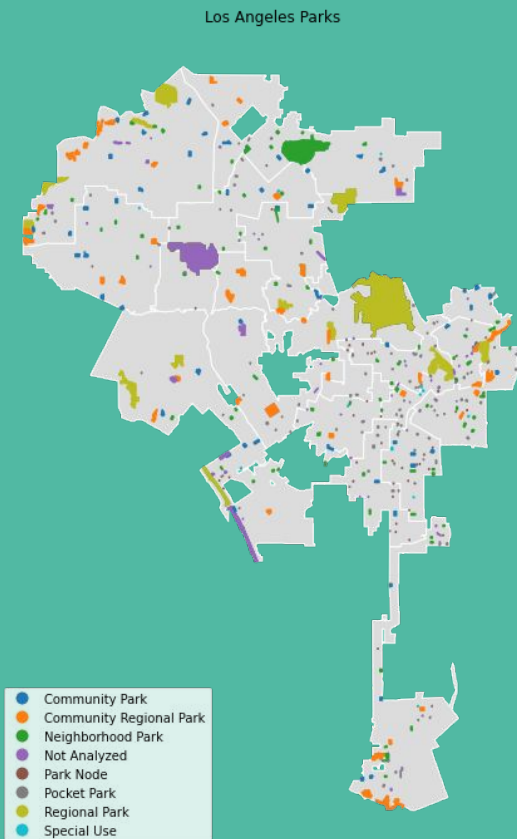
Los Angeles Park Accessibility





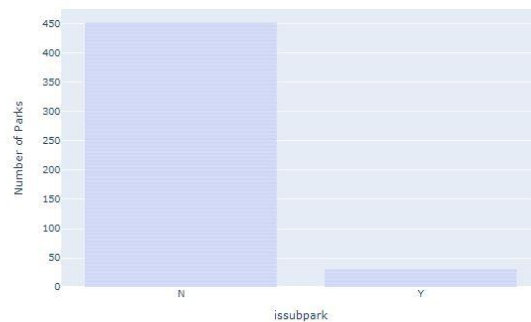
# 452

*Parks in Los Angeles not  
counting subparks*



```
#are many parks subparks?  
chart=px.bar(park_info,  
             x='issubpark',  
             labels={'type':'Park Type','count':'Number of Parks'},  
             title='Los Angeles Park Types',  
             barmode='group')  
chart.update_layout(  
    xaxis = dict(  
        tickmode = 'linear',  
        ticks = 1,  
        dtick = 1  
    )  
)
```

Los Angeles Park Types



```
#we want to avoid overlapping geometries where possible  
#so it makes sense to eliminate subparks  
park_info=park_info[park_info['issubpark']=='N']  
park_info.describe
```

• **Challenge: remove subparks**



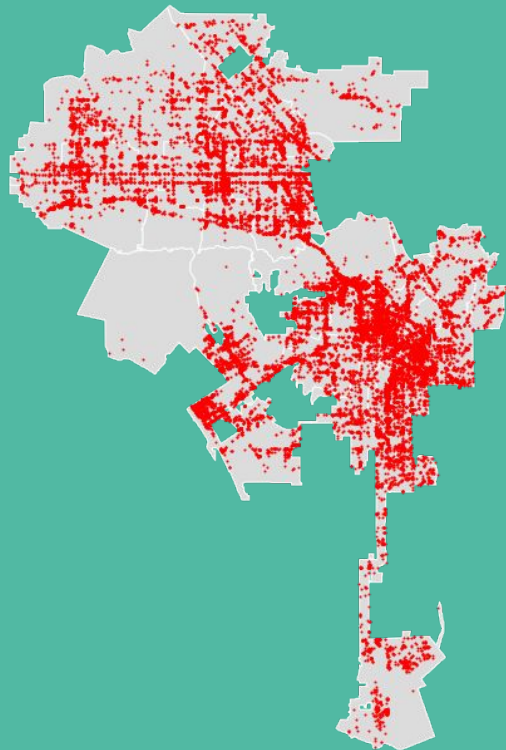
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# 44.5k

*Encampments were  
reported across LA last  
year.*

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Encampment Reports in Los Angeles, 2019

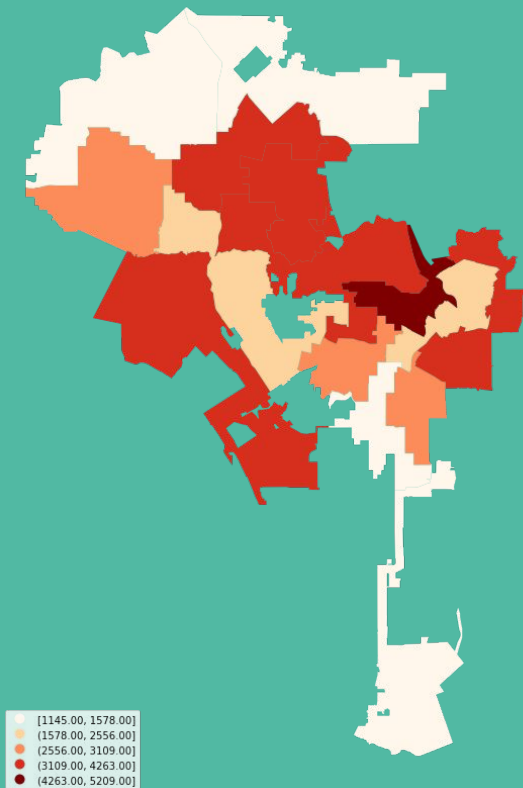


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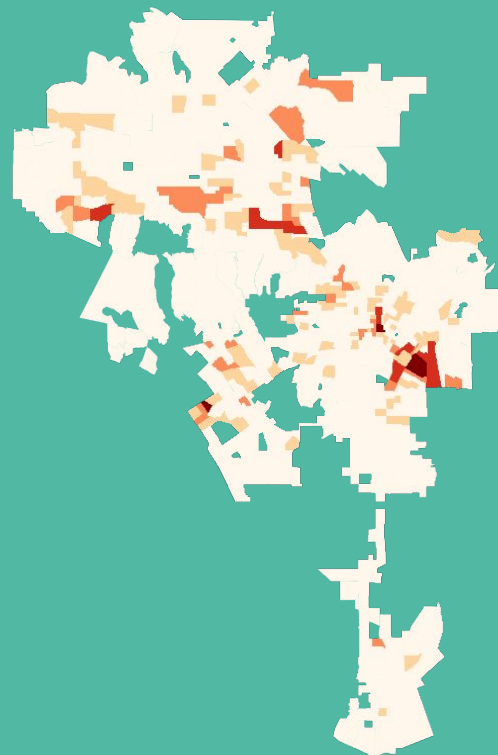
# 44.5k

*Encampments were  
reported across LA last  
year.*

Encampment Reports in Los Angeles Council Districts



Encampment Reports in Los Angeles Census Tracts

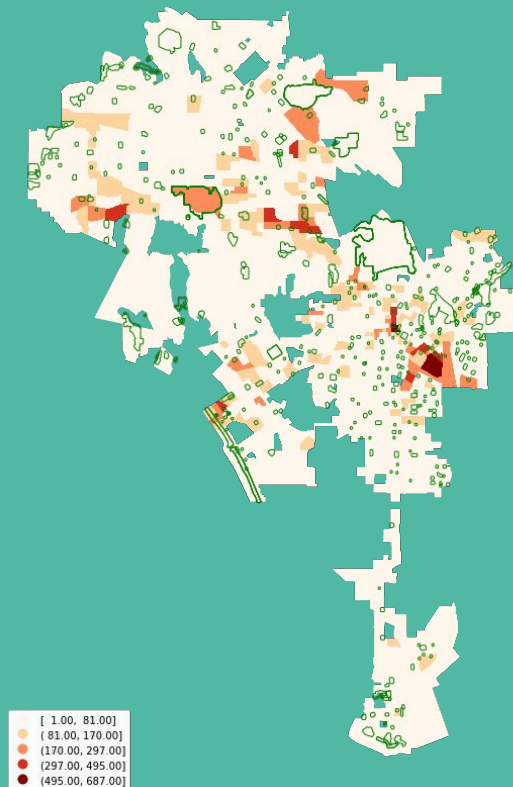


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# 44.5k

*Encampments were  
reported across LA last  
year.*

Los Angeles Parks and Encampment Reports



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# 55%

of Encampment Reports  
used approximate or  
unverified locations

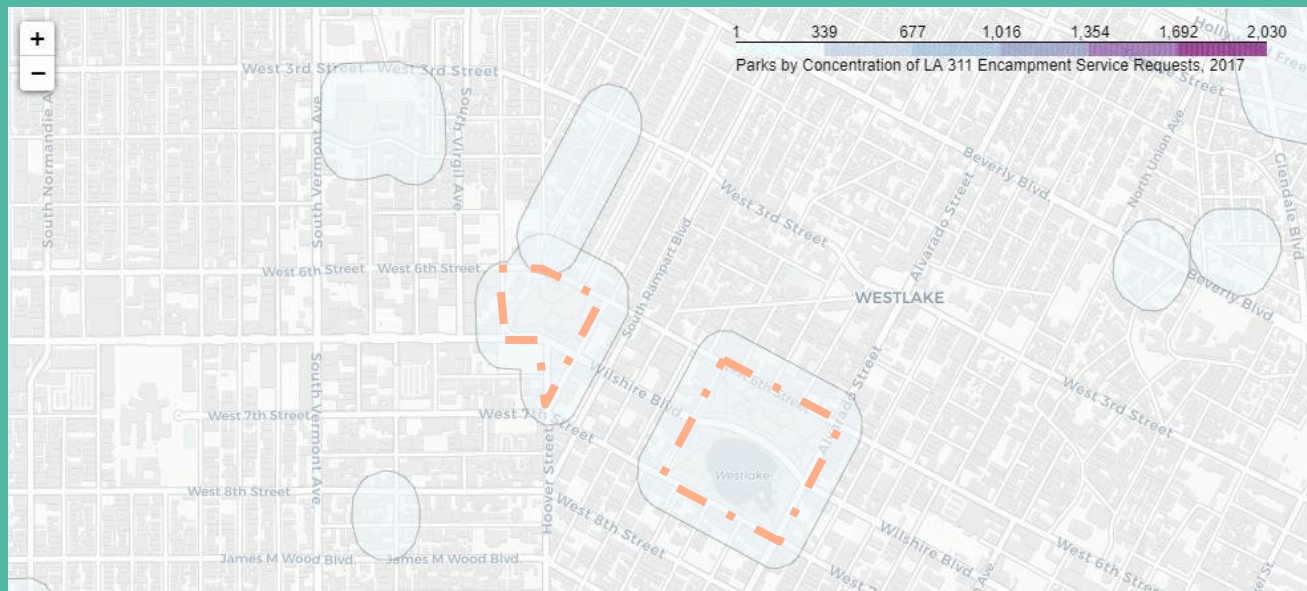
```
In [112]: #Note that there is a column asking whether location is approximate
          #how many were approximated?
          #I also want a percentage so Lets do some math
          #Wow - a huge percentage of Service Requests used an approximate location.
          #That will be important to remember.
          df_approx_loc=encamp_19[encamp_19['approx_loc']=='N']
          print(str(len(df_approx_loc)) + ' of 44,583 Encampment Reports used an exact location')
          print((str(len(df_approx_loc)/(len(encamp_19))*100) + '% Encampment Reports used an exact location')
          print(str(100 - (len(df_approx_loc)/(len(encamp_19))*100)) + ' % of Encampment Reports used approximate or unverified locations')

19909 of 44,583 Encampment Reports used an exact location
44.65603481147522% Encampment Reports used an exact location
55.34396518852478 % of Encampment Reports used approximate or unverified locations
```

- **Challenge: unable to round percentages cleanly**

# 1/2 Block

*Buffer encompasses  
Encampments on the  
edge of parks + those  
immediately adjacent*



Respectably street parks can be hard to find an address for  
#Let's create a 1/2 block radius buffer  
`park_info['geometry']=park_info.geometry.buffer(.001)`

- Challenge: testing buffer width
- Challenge: Approach is extreme for park node
- Challenge: presumably this method is double-counting some Encampment Reports

# 1/2 Block

*Leading to a 515%  
increase in the amount  
of encampment reports  
in the study area*

1134 encampments were reported in parks  
2.5435704192180877% Encampment Reports were for park areas

Out[66]:

	name	freq
74	Sepulveda Basin Recreation Area	390
26	Hansen Dam Recreation Area	135
77	Shatto Recreation Center	58
90	Venice Beach	54
24	Griffith Park	50

6977 encampments were reported in or near parks  
15.649462799721867% Encampment Service Requests were for park areas

Out[49]:

	name	freq
218	Sepulveda Basin Recreation Area	2030
102	Hansen Dam Recreation Area	365
223	Shatto Recreation Center	320
97	Griffith Park	270
260	Venice Beach	172

```
In [169]: #how much of a difference do buffers make?
print('A 1/2 block buffer captures '+(str(len(park_encamp)-(len(park_encamp_ex)))) + ' more encampment reports')
print('This reflects a '+(str((len(park_encamp)-(len(park_encamp_ex)))/(len(park_encamp_ex)*100)) + ' % increase in reports')

A 1/2 block buffer captures 5843 more encampment reports
This reflects a 515.2557319223986 % increase in reports
```

# CDs

*Looking for relationships  
between parks and  
encampment reports by  
Council District*

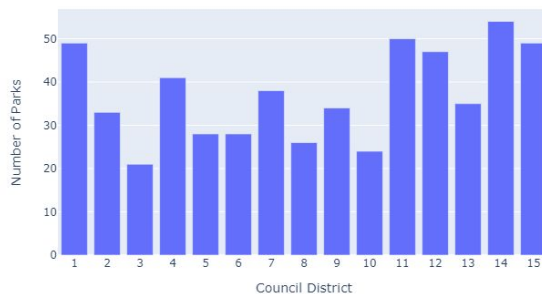
Encampment Service Requests per LA City Council District



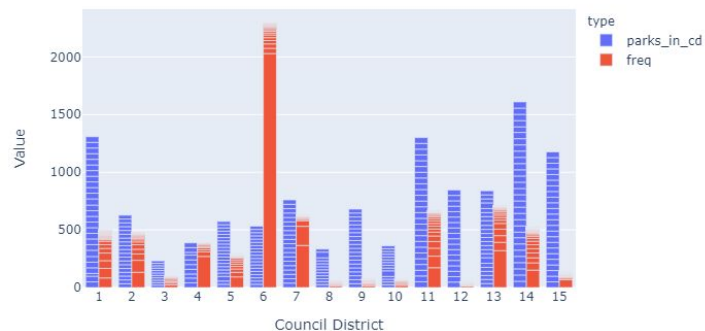
LA Council Districts by Park Acreage and Park Based Encampment Reports



Parks per LA City Council District



LA Council Districts by Number of Parks and Park Based Encampment Reports

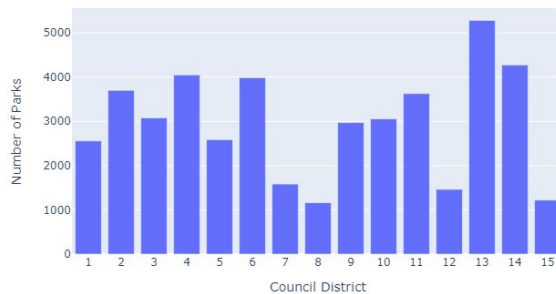




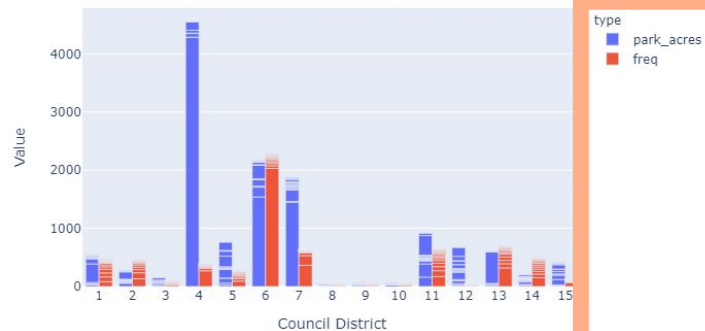
# CDs

*Looking for relationships  
between parks and  
encampment reports by  
Council District*

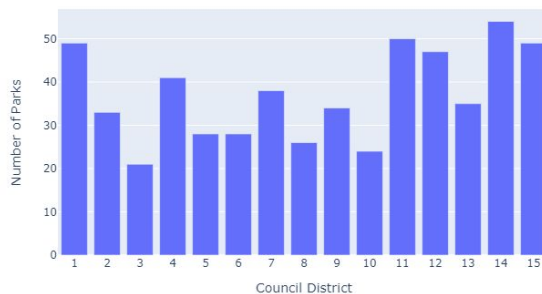
Encampment Service Requests per LA City Council District



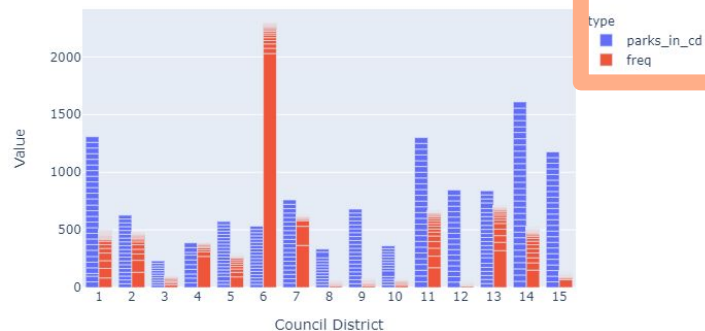
LA Council Districts by Park Acreage and Park Based Encampment Reports



Parks per LA City Council District



LA Council Districts by Number of Parks and Park Based Encampment Report



# Type

*Park type has a more significant relationship than park size*

**Park Node** 1/4 acre or less

**Pocket Park** less than 3 acres

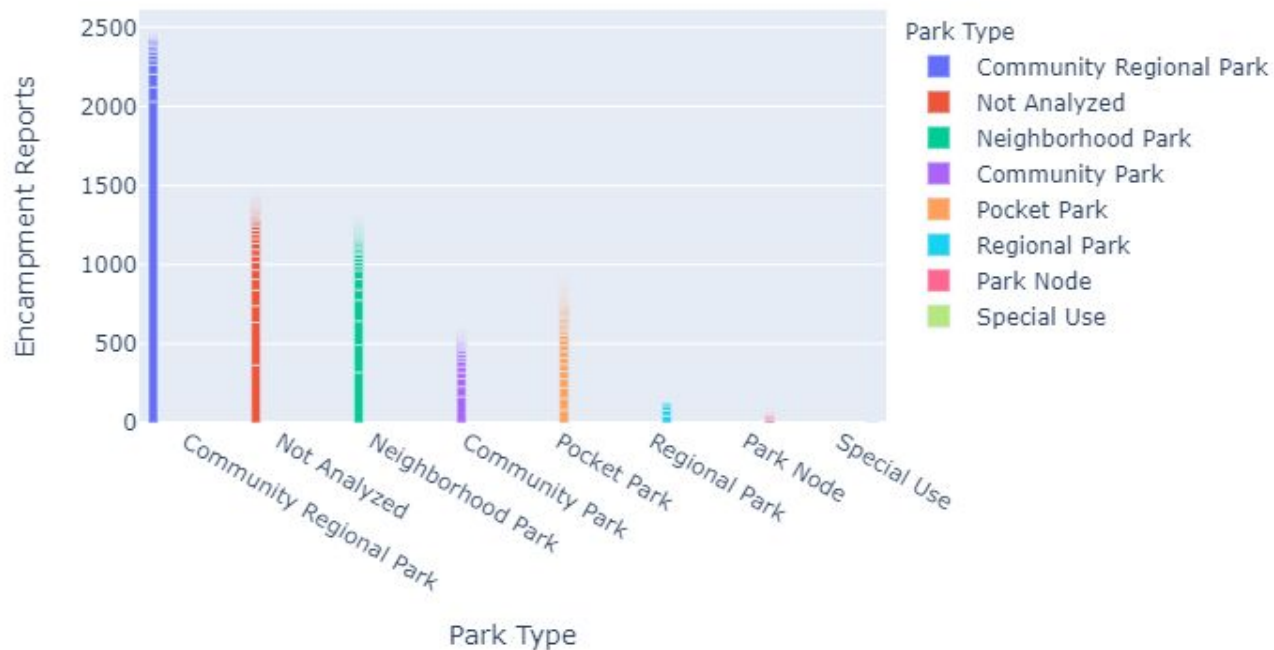
**Neighborhood Park** 3 - 10 acres

**Community Park** 10 - 20 acres

**Regional Park** 10-20 acres

**Community Regional Park**  
20-100 acres

Los Angeles Park Based Encampment Reports by Park Type



# Type

***Park type has a more significant relationship than park size***

### Park Node 1/4 acre or less

## Pocket Park less than 3 acres

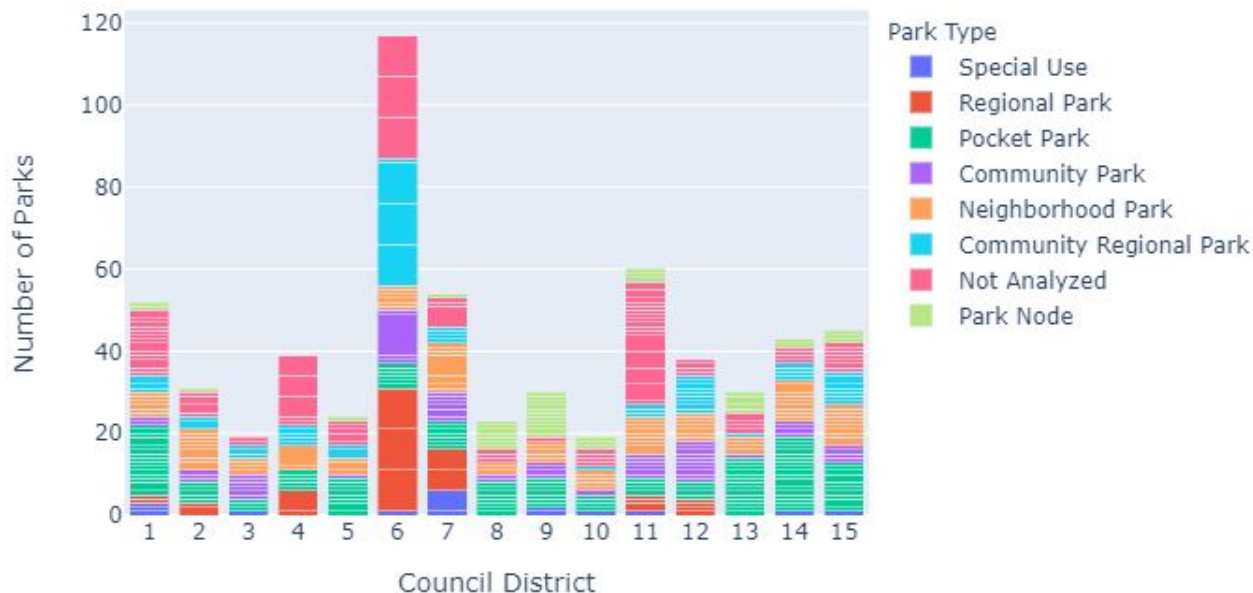
## Neighborhood Park 3 - 10 acres

## Community Park 10 - 20 acres

## Regional Park 10-20 acres

**Community Regional Park**  
20-100 acres

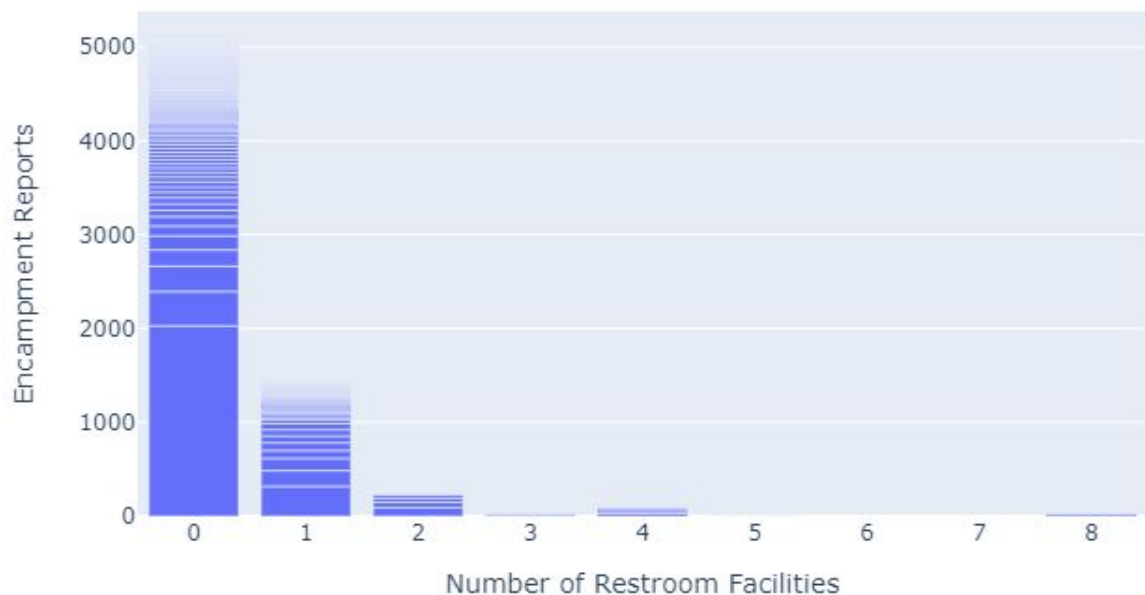
### Park Types per LA City Council District



# Type

*Parks with fewer restroom facilities (not fixtures/stalls) have more encampment reports.*

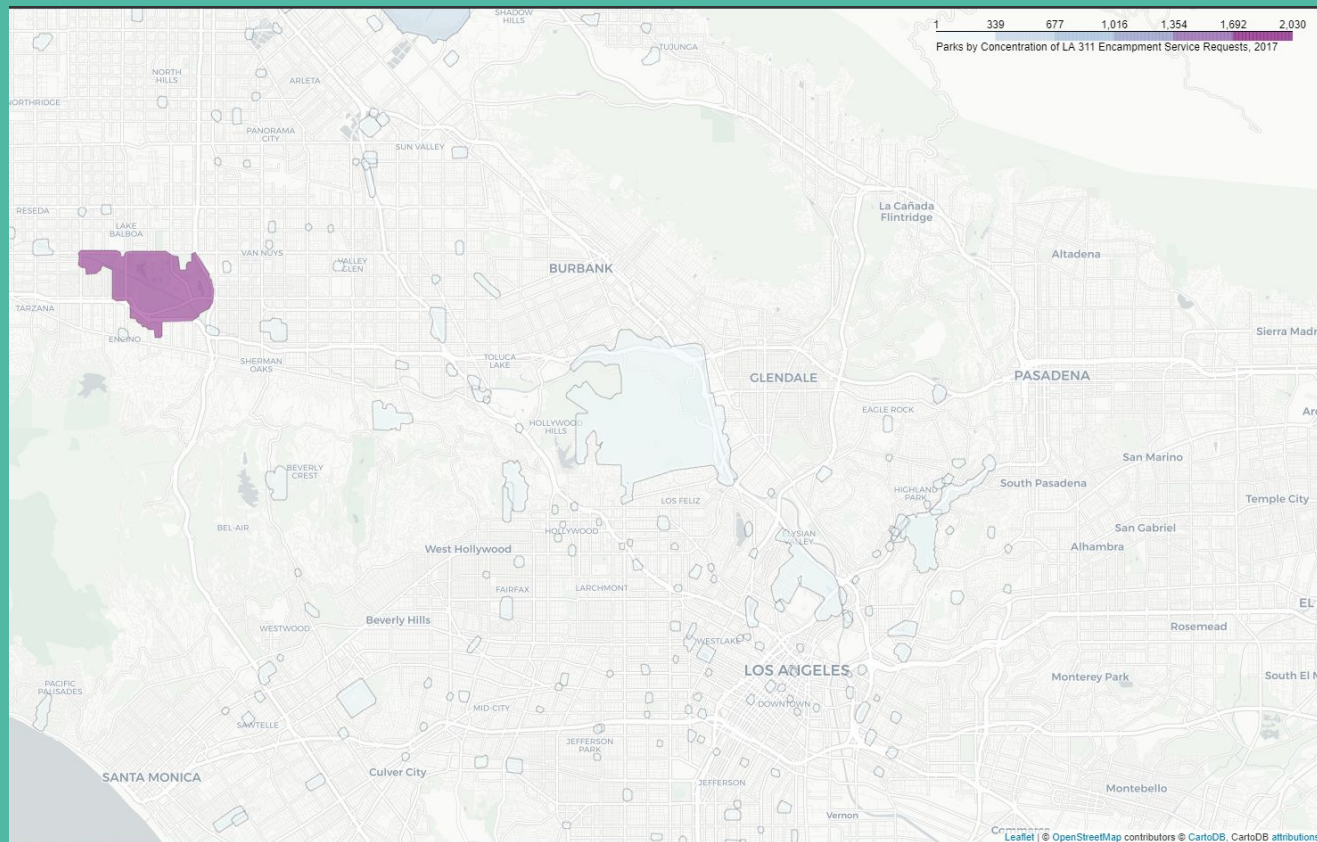
Park Based Encampment Reports by Number of Restroom Facilities



# Map

*Interactive mapping of  
parks with encampment  
reports*

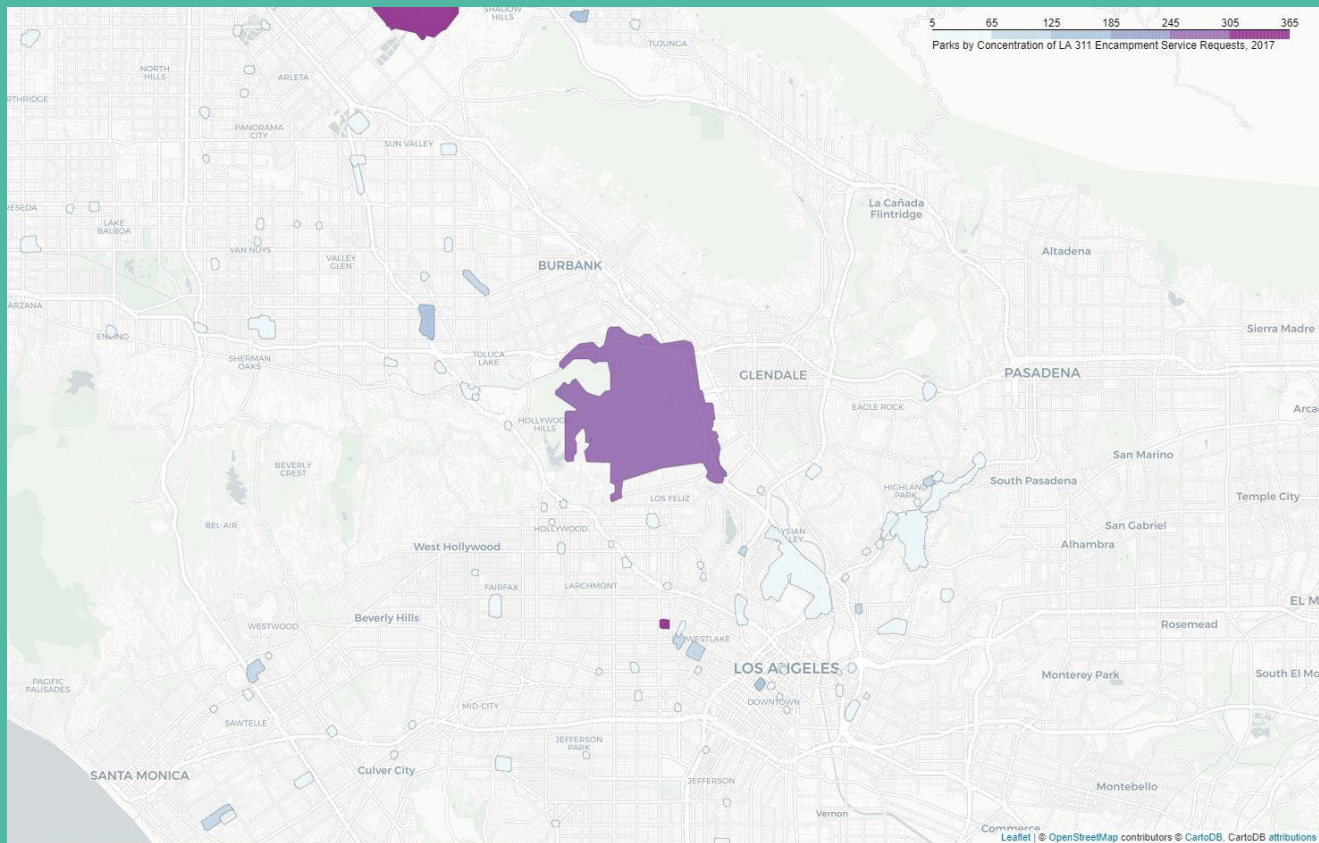
- **Challenge: outlier**



# Map

*Interactive mapping of  
parks with encampment  
reports*

- **Challenge: outlier**

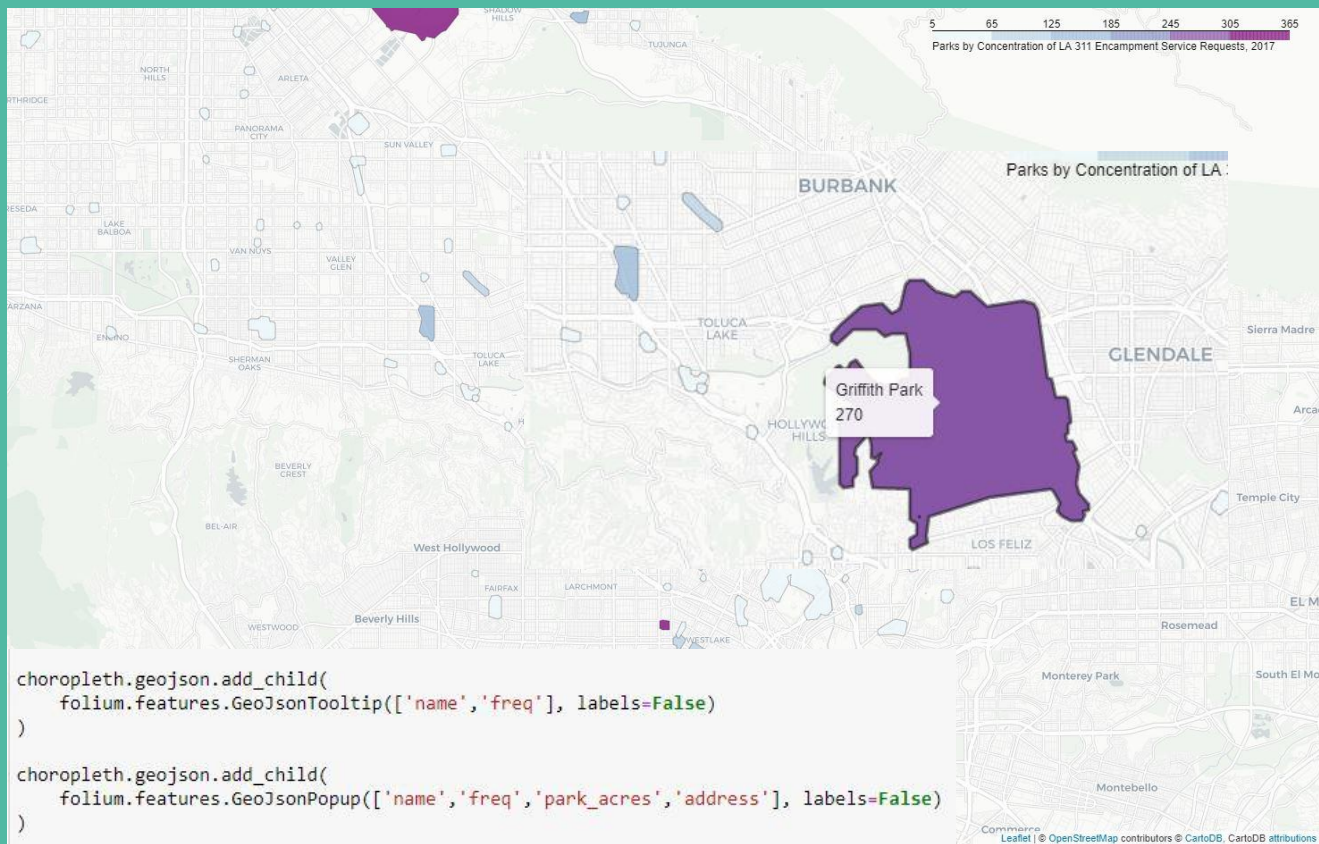




# Map

*Interactive mapping of  
parks with encampment  
reports*

- **Challenge: tooltip**

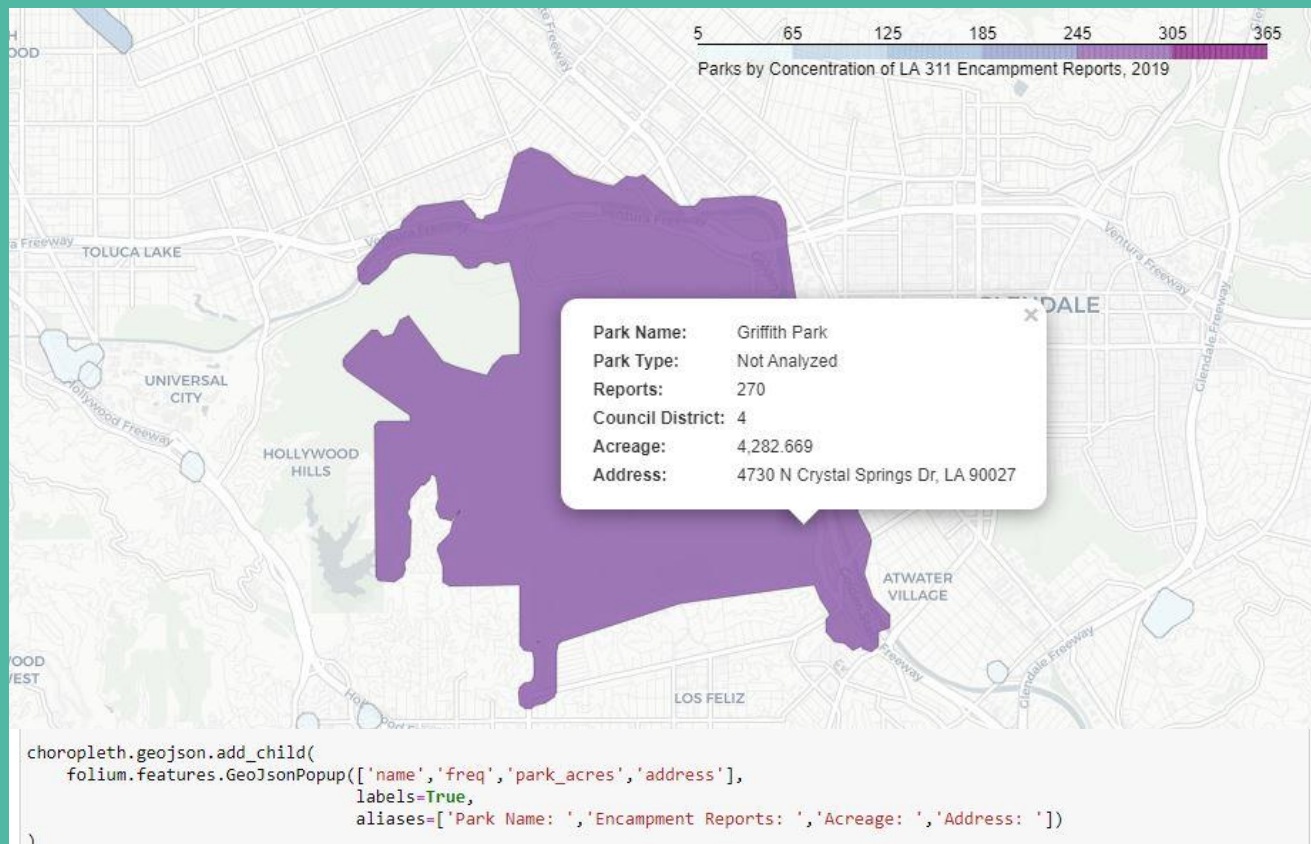




# Map

*Interactive mapping of  
parks with encampment  
reports*

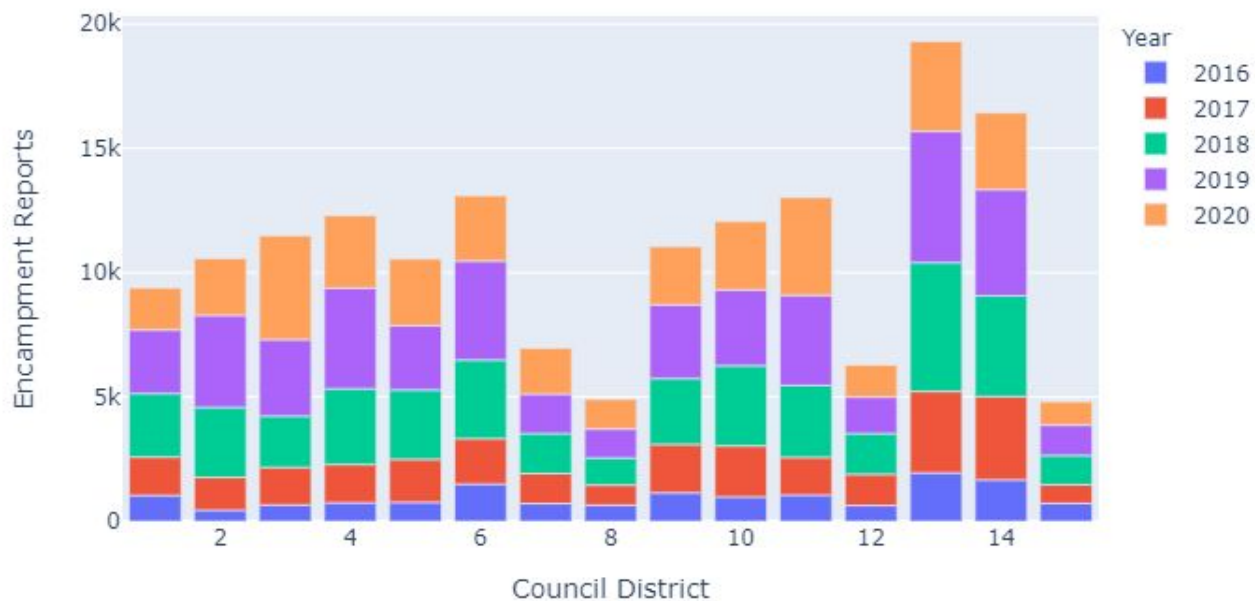
- **Challenge: editing text**



# Time

*Data from 2016-2020  
informs shifts in amount  
and location of reports*

Annual Encampment Reports per LA City Council District, 2016-20



# Time

*Data from 2016-2020  
informs shifts in amount  
and location of reports*

- *Challenge: concatenating*
- *Challenge: wide format data*
- *Challenge: animation*

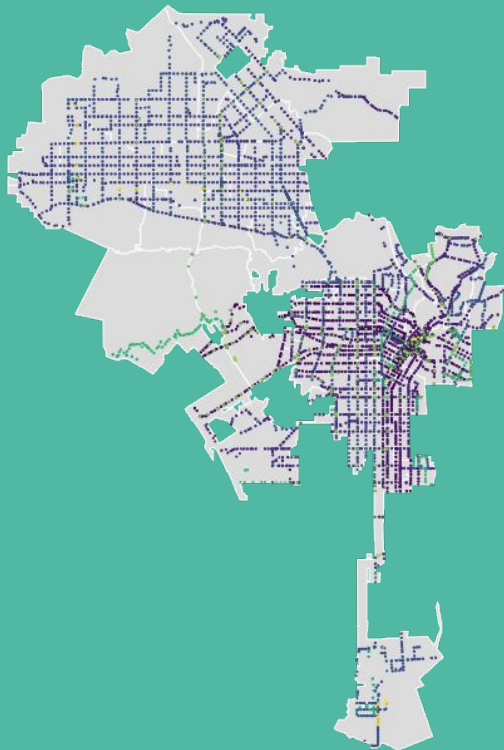
	cd	2016	2017	2018	2019	2020
0	1	1044	1540	2554	2558	1694
7	2	451	1317	2815	3699	2286
8	3	662	1509	2058	3076	4184
9	4	749	1537	3049	4048	2914
10	5	764	1730	2788	2585	2686
11	6	1498	1829	3158	3986	2621
12	7	712	1210	1613	1583	1847
13	8	651	805	1094	1162	1192
14	9	1147	1947	2646	2971	2341
1	10	983	2050	3224	3054	2748
2	11	1057	1514	2895	3626	3933
3	12	636	1255	1643	1463	1287
4	13	1950	3275	5179	5279	3619
5	14	1667	3353	4047	4273	3088
6	15	723	748	1176	1220	942

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# 13.5k

*Bus Stops in Los Angeles, serving 137 lines*

Los Angeles Bus Stops



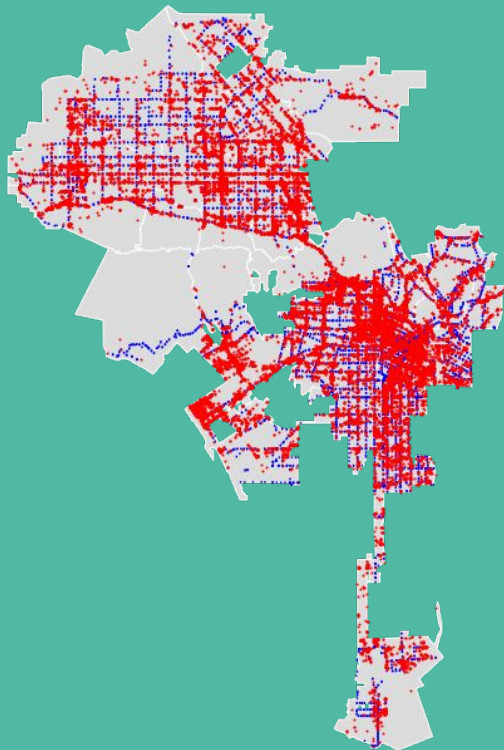
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# 13.5k

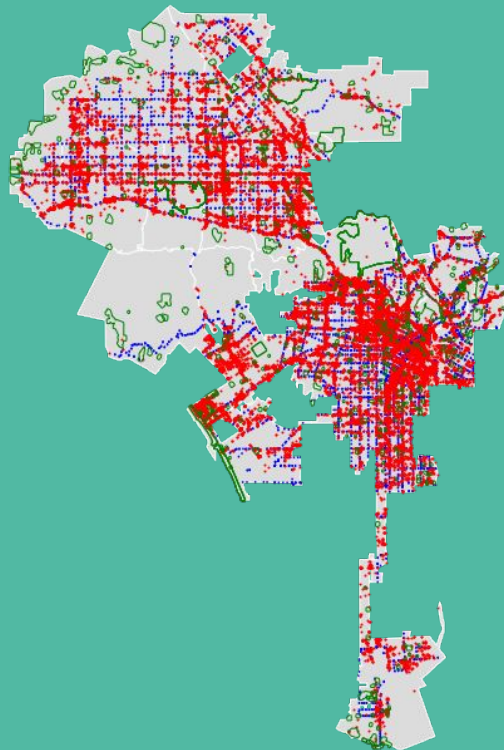
*Examining transit  
accessibility and  
correlation*

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Bus Stops and Encampment Reports in Los Angeles, 2019



Parks, Bus Stops, and Encampment Reports in Los Angeles, 2019



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*Questions?*

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Out[15]:

	created	loc_verified	approx_loc	lat	long	apc	cd	cd_member	nc	nc_name	precinct	geometry
0	8/26/2019 13:56	Y	N	33.70633171	-118.2929289	Harbor APC	15	Joe Buscaino	96	COASTAL SAN PEDRO NC	HARBOR	None
1	2/23/2019 12:47	Y	N	33.70971583	-118.2864142	Harbor APC	15	Joe Buscaino	96	COASTAL SAN PEDRO NC	HARBOR	None
2	6/30/2019 21:42	Y		33.71047284	-118.2862046	Harbor APC	15	Joe Buscaino	96	COASTAL SAN PEDRO NC	HARBOR	None
3	6/30/2019 17:34	Y	N	33.71148326	-118.2930027	Harbor APC	15	Joe Buscaino	96	COASTAL SAN PEDRO NC	HARBOR	None
4	7/2/2019 15:15	Y		33.71372994	-118.293106	Harbor APC	15	Joe Buscaino	96	COASTAL SAN PEDRO NC	HARBOR	None

Out[7]:

	park_id	name	shape_area	shape_leng	area_acres	issubpark	address	cd_real	geometry
0	471	Vista Hermosa Soccer Field	81856.4316403	1293.65778036	1.87917261403	N	1301 W 1st St, LA 90026	1	MULTIPOLYGON (((-118.2571734,0.6159,-118.2569...
1	453	Ernest E Debs Regional Park	13879064.2613	26943.5567173	318.620747882	N	4235 N Monterey Rd, LA 90032	1	MULTIPOLYGON (((-118.1880334,10388,-118.1879...
2	65	Cleland Avenue Bicentennial Park	40077.2540351	1363.12458794	0.920050834356	N	4800 E Cleland Ave, LA 90042	1	MULTIPOLYGON (((-118.2117834,11341,-118.2118...
3	1	Sycamore Grove Park	691462.199493	6227.3991903	15.8738513625	N	4702 N Figueroa St, LA 90042	1	MULTIPOLYGON (((-118.2011034,10134,-118.2011...
4	422	Downey Pool	45451.0029074	941.017165962	1.043415627	Y	1775 N Spring St, LA 90031	1	MULTIPOLYGON (((-118.2239434,07113,-118.2240...