

Battle of the Neighborhoods – Solutions/Data

Ideas: So the questions that comes to mind are where are the best Los Angeles areas to provide jewelry services to high net-worth individuals? What is the best way to find these individuals and have them visit our store(s)? How can we find high net-worth individuals?

Solution: In my opinion the best answer is not to focus on such people because they could be spread out through out Los Angeles. In some areas more and in some areas with less density. Additionally, some could also leave in middle class areas. So instead of focusing on distinguished clientele, we will focus on properties which such individuals own, specifically their homes. In conclusion, we will be focusing on Los Angeles zip codes that have the highest >average< house values.

Solution in Detail: So should we just find the first zip code with the highest average house price, and put up our jewelry store there? The answer is NO, because some expensive zones could be mostly residential, or the zones might not have the right type business environment or the zones/centers might not be the right type for jewelry store foot traffic. So we will grab the top 10 zip codes and cluster them into three groups and then evaluate each group by the type of popular venues/businesses nearby.

Resources/Data: Our analysis will be based on several types of resources and data:

- A list of all Los Angeles county zip codes, names and geo positions
- Resources: <https://simplemaps.com/data/us-zips>
- Data Sample:

zip	lat	lng	city	state_id	state_name	zcta	parent_zcta	population	density	county_fips	county_name	all_county_weights
00601	18.18	-66.7522	Adjuntas	PR	Puerto Rico	TRUE		18570	111.4	72001	Adjuntas	{72001:99.43,72141:0.57}
00602	18.3607	-67.1752	Aguada	PR	Puerto Rico	TRUE		41520	523.7	72003	Aguada	{72003:100}
00603	18.4544	-67.122	Aguadilla	PR	Puerto Rico	TRUE		54689	667.9	72005	Aguadilla	{72005:100}
00606	18.1672	-66.9383	Maricao	PR	Puerto Rico	TRUE		6615	60.4	72093	Maricao	{72093:94.88,72121:1.35,72153:3.78}
00610	18.2903	-67.1224	Anasco	PR	Puerto Rico	TRUE		29016	311.9	72011	Anasco	{72011:99.45}
00612	18.407	-66.708	Arecibo	PR	Puerto Rico	TRUE		67010	382.7	72013	Arecibo	{72013:99.89,72017:0.11}
00616	18.4175	-66.6681	Bajadero	PR	Puerto Rico	TRUE		11017	368.9	72013	Arecibo	{72013:100}
00617	18.4417	-66.5502	Barceloneta	PR	Puerto Rico	TRUE		24507	635.1	72017	Barceloneta	{72017:99.43,72054:0.57}

- A list of all Los Angeles county zip codes and their average “single family” home values
- Resource: <https://www.zillow.com/los-angeles-county-ca/home-values/>
- Data Sample:

Region Name	Region Type	Type	Current	Month Over Month	Quarter Over Quarter	Year Over Year	5 Year Annualized	10 Year Annualized	Decreasing values (%)	Sold for loss (%)	Listings with price cut
				Current	Month Over Month	Quarter Over Quarter	Year Over Year	Current	Month Over Month	Quarter Over Quarter	Year Over Year
Los Angeles County	Single Fam	Single Fam	\$637,700	0.3%	-0.7%	1.8%	---	---	25.0%	---	---
00001	zipcode	Single Fam	\$378,200	0.4%	1.7%	6.1%	---	---	20.0%	---	---
00002	zipcode	Single Fam	\$376,600	0.1%	0.7%	4.9%	---	---	7.6%	---	---
00003	zipcode	Single Fam	\$397,600	1.0%	3.5%	11.7%	---	---	14.0%	---	---
00004	zipcode	Single Fam	\$1,576,100	0.3%	-0.4%	1.0%	---	---	50.5%	---	---
00005	zipcode	Single Fam	\$1,732,000	0.1%	0.4%	12.2%	---	---	47.1%	---	---
00006	zipcode	Single Fam	\$838,700	-0.6%	-1.7%	5.4%	---	---	36.6%	---	---
00007	zipcode	Single Fam	\$668,300	0.6%	-1.7%	4.7%	---	---	21.0%	---	---
00008	zipcode	Single Fam	\$856,300	0.1%	0.7%	6.5%	---	---	21.6%	---	---

- Finally, top 5 venues for each of the “top 10 zip codes” above
- Resource: Foursquare.com

Machine Learning Algorithm: The best suited algorithm for clustering/grouping our top 10 zip codes will be K-Means algorithm creating three K's evaluating five top venues for each cluster.