Isla Vista Housing Guide

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Background

Isla Vista is a 1.86 square mile community that contains a population of over 20,000 people. The majority of Isla Vista’s residents are transient students of the University of California, Santa Barbara or Santa Barbara City College. It can be difficult to fully understand the dynamics of Isla Vista when deciding on where to rent an apartment. And our project aims to provide a guide people can rely on to find the housing that is best suited to them.

Abstract

Our research question is: What are the most optimal housing parcels based on someone’s personal preferences for the following factors: estimated monthly rent, noise, crime, proximity to recreations such as the beach, gyms and parks and proximity to conveniences such as campus, bus stops, and supermarkets? To tackle this question, we used our method, we simply limited the maximum and minimum values but it allowed for outliers to skew the data. Standardizing all of the data would make it more uniform and accurate to compare to each other with less outlier influence.

Data

- Parcel data from Zillow.com as a polygon and extracted to a point shapefile.
- Estimated monthly parcel rent data derived from Zillow.com.
- Accessibility point data created from a base map on ArcGIS online.
- Road data from Santa Barbara County as a line shapefile.
- Crime and noise data (noise being noise violations) from UC Police Department ARMS Database as a PDF table from May 30th 2017 to May 30th 2018.

Methods

In general, the line density results have shown that there is more crime in 6800 blocks. However, we believe that this is due to the line density not being clipped to the road geometry. The streets are closer together in 6800 blocks which shows a higher density of crime in that area despite the crime being highest on Del Playa Drive (especially on 6500 block of Del Playa Drive). The kernel density results have shown that there is more noise near the intersection of 6600 and 6500 block of Del Playa Drive going up towards Trigo Road. This makes sense as Del Playa Drive and Sabado Road are very popular streets to hold parties.

Analysis

The data for all factors could have been more standardized to ensure better accuracy when comparing. The imprecision of the crime and noise data. The precise location of some crimes is not available to the public in order to protect the privacy. And in the database, incident points close to each other are also merged, making it less accurate. Most were given the roadblock location but many were given just the street name so we added the street name only crimes to every block in that street. This results in some roads having more crime that they really do. The noise data was similar but put more accurately on intersections.

Challenges

- The data for all factors could have been more standardized to ensure better accuracy when comparing.
- The imprecision of the crime and noise data. The precise location of some crimes is not available to the public in order to protect the privacy.

Conclusions

In conclusion, the maps have a general trend where 6800 block and 6500 / 6600 block of Del Playa Drive, Sabado Tarde Road, and Trigo Road are considered not optimal for housing. For 6800 block, this probably due to the generally high cost of rent in the area, high density of crime (due to the streets being closer together) and farther distance to proximity points (excluding beach access). Having three not optimal factors in one area will probably skew most of the results to showing that area being less optimal regardless of the weight of each factor. The factor weight will still have an effect, but it appears that it slightly extends or extracts that hotspot area. This is similar to 6500 / 6600 block of Del Playa, Trigo and Sabado Roads since there is a very high density of crime in that area (and high rent) that will make that area a bit more prone to be less optimal. However, the weight still affects the results. Zhu’s result had the 6500 / 6600 block have a yellow (medium optimal) score while Edwin and the default equal preferences result had that in bright red (extremely less optimal). It appears that the more optimal housing is closer to El Colegio (closer to bus stops, farther from noise and crime) and 6500 blocks (closer to campus and food shop access while being farther away from crime). Although the maps tend to have general trends, the weight factors do affect the result (which can be most noticeably seen when looking at the hotspots and how those change from different people’s preferences).

Future Direction

We hope to see that this project continues and develops so that it can be used on smartphones as a mobile application one day or on an online website. Possibly expanding outside of the Isla Vista area to all other universities so that students everywhere can have a keen experience when coming to a college that matches their suitability criteria. This project brings more than just a resource to students looking to live comfortably in Ilsa Vista, it can also be used to facilitate real estate.

References

- Santa Barbara County Data
- UCPD ARMS Database
- www.zillow.com
- https://www.census.gov/
- www.Arcgis.com

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