

Best Neighborhoods in South King County for Seattle Workers

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Data Science Capstone – The Battle of Neighborhoods

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Abstract

South King County in Washington state, an area just outside Seattle, has many neighborhoods that still provide conveniences and allow for their residents to pursue job opportunities in Seattle proper. This report considers which areas in Auburn, Federal Way, Burien, Des Moines, Kent, and Renton have the most amenities in their zip code that would serve a typical Seattle worker. The amenities considered are how many police stations, hospitals/medical facilities, Metro park-and-rides, and restaurants are within each zip code. Each zip code/city can be scored accordingly, yielding the “best” neighborhood in South King County. Hopefully, this information will inform a typical Seattle employee who does not wish to live in the city about some great areas to live that still carry some of the perks of living in the city, while allowing easy transportation to and from Seattle.

Introduction

King County in Washington State is agreed by many to be a great place to live. Home to the city of Seattle, it is, according to the Seattle Times, ranked 2nd in the country for home prices, as, despite the COVID-19 Coronavirus Pandemic, men and women are still flocking to this beautiful, convenient area. Many homebuyers, discouraged by the prices of living in Seattle proper, are looking for alternatives that still boast nearness to important institutions, such as police and medical care, but also have the convenience of dining options and transportation to and from Seattle for work purposes.

It is important for these potential homeowners to know what is available in an area and if it will meet their needs before committing to such a large and important purchase. Therefore, the goal of this project is to determine which neighborhood has the most amenities in 4 main areas: police stations, medical facilities, Metro park-and-rides, and restaurants. The hope is that the areas with more options will give residents a city-feel without the price tag.

Homebuyers will be benefited to know these things in advance in aid of narrowing-down their search, saving time and therefore money. Realtors can also use this information to better present and sell houses in these neighborhoods to prospective buyers.

Data

The data used for city and zip codes in South King County is taken from public.opendatasoft.com and filtered for zip codes in Auburn, Federal Way, Burien, Des Moines,

Tukwila, SeaTac, Kent, and Renton. The data for police stations, medical facilities, and Metro park-and-rides is provided by the King County GIS Open Data website and will be narrowed down to the cities and zip codes listed above. The Metro park-and-ride data and the medical facility data has addresses and zip codes listed, but not cities. Therefore, before these tables are pulled into Python, each address will need to be looked up and the city column added. Data regarding restaurants in the area will be pulled from Foursquare, and, again, narrowed down to the cities and zip codes above.

Each csv file provided by the King County GIS Open Data website has at least a zip code field, and after addition of a city field, will be ready for merging these two fields. A sample portion of this data is provided below:

Longitude	Latitude	OBJECTID	FEATURE_ID	ESITE	CODE	NAME	ABB_NAME	ADDRESS	ZIPCODE	CITY
-122.3215905	47.64297722	1	650070	419120	65	WSP District 2 Seattle North Detachment	WSP District 2 Seattle N Detatch	811 E Roanoke	98102	Seattle
-122.3553481	47.51702598	2	650016	500461	65	White Center Storefront	White Center	1327 SW 102nd St	98146	Unincorporated King County
-122.3041355	47.53737855	3	650084	764142	65	KC Airport Law Enforcement	KC Airport Law Enforcement	7277 Perimeter Rd S	98108	Seattle
-122.1519583	47.44443481	4	650008	611396	65	Fairwood Storefront	Fairwood	17620 140th Ave SE	98058	Unincorporated King County
-122.0441405	47.39509227	5	650001	620199	65	KC Precinct 3 Headquarters	KC Precinct 3 HQ	22300 SE 231st St	98038	Maple Valley
-122.3435671	47.76350026	6	650003	16141	65	Shoreline Police Department	Shoreline PD	1206 N 185th St	98133	Shoreline
-122.322802	47.5895736	7	650023	766111	65	Metro Transit Police Unit	Metro Transit Police Unit	1301 Airport Way S	98104	Seattle
-121.3599777	47.71022038	8	650024	72724	65	Skykomish Substation	Skykomish	119 4th St N	98288	Skykomish
-122.168861	47.53853231	9	650025	988637	65	Newcastle Police Department	Newcastle PD	12835 Newcastle Way	98056	Newcastle
-122.1343241	47.58471363	10	650038	96617	65	WSP District 2 Headquarters and Communications	WSP District 2 HQ	2803 156th Ave SE	98007	Bellevue
-122.2493805	47.76051602	11	650049	149398	65	Kenmore Police Department	Kenmore PD	18120 68th Ave NE	98028	Kenmore
-122.2727537	47.4337568	12	650081	398703	65	SeaTac Police Department	SeaTac PD	4800 S 188th St	98188	SeaTac
-122.2896882	47.46262144	13	650071	734397	65	WSP District 2 Seattle South Detachment	WSP District 2 Seattle S Detach	15666 International Blvd	98188	Tukwila
-121.8757013	47.52708967	14	650072	194417	65	Snoqualmie Police Department	Snoqualmie PD	34825 SE Douglas St	98065	Snoqualmie
-122.0368039	47.60132348	15	650006	375887	65	Sammamish Police Department	Sammamish PD	801 228th Ave NE	98075	Sammamish
-122.1180698	47.35922472	16	650020	672195	65	Covington Police Department	Covington PD	16720 SE 271st St	98042	Covington
-122.2391237	47.61536028	17	650039	118339	65	Medina Police Department	Medina PD	501 Evergreen Point Rd	98039	Medina
-122.0025837	47.30911746	18	650040	637870	65	Black Diamond Police Department	Black Diamond PD	25510 Lawson St	98010	Black Diamond
-122.2294419	47.36864845	19	650052	662134	65	Corrections Facility (Jail)	Corrections	1230 Central Ave S	98030	Kent
-122.3172777	47.61491969	20	650066	453753	65	Seattle Police East Precinct	SPD East Precinct	1519 12th Ave	98122	Seattle
-122.4623406	47.44709249	21	650022	408450	65	Vashon Substation	Vashon	10011 SW Bank Rd	98070	Unincorporated King County
-122.2484147	47.27798961	22	650028	802571	65	Algona Police Department	Algona	402 Warde St	98001	Algona

The website downloaded data will be uploaded into a Jupyter Notebook using Python code. The tables will be cleaned for necessary data only, city and zip code fields will be merged, and counts will be prepared for each amenity type, using the city-zip code field for grouping to enhance specificity. The restaurant data will be uploaded using Foursquare and, likewise, cleaned and prepared. The tables will be sorted by highest frequency and each city-zip code will be evaluated. An amenity score will be given for each city-zip code for each amenity, out of 100, based on the number of total amenities available and the number found in each city-zip code. The scores will be added and reported. The city-zip codes with the highest scores will be considered the best ones to live in.

Methodology

Analysis

Results

Discussion

Conclusion

References

Khashimova Long, K. (2020, November 24). Seattle-area home price growth continues to accelerate; city still No. 2 in the nation. Seattle Times, Online. Retrieved December 04, 2020 from <https://www.seattletimes.com/business/real-estate/seattle-area-home-price-growth-continues-to-accelerate-city-still-no-2-in-the-nation/>.

King County, Washington. (2017). GIS Open Data. Updated June 19, 2019. Retrieved December 04, 2020, from <https://gis-kingcounty.opendata.arcgis.com/>.

US Zip Code Latitude and Longitude. (2018, February 09). Retrieved December 04, 2020, from <https://public.opendatasoft.com/explore/dataset/us-zip-code-latitude-and-longitude/table/>.