

Property Proposal for Nicole Johnson

Presentation for SPICED EDA Project

Chris de la Cerda, 08-Dec-2023

Meet Nicole Johnson

Who is Nicole Johnson?

Nicole is a female professional, who has recently moved to Seattle WA. Nicole is single and works as a Sr Consultant in Downtown Seattle. She makes approx. USD 150K per year.

Nicole loves to go out and enjoys Seattle's vibrant dining and club scene. She would love to live close to these trendy neighborhoods and also enjoy an easy commute into Downtown Seattle.

While things vibrant are fine at night, Nicole wants to live in well-to-do areas where she assumes services and community life are "more her kind of style".

Nicole looks for a two-bedroom property with two bathrooms so that friends & family can stay over

Nicole is also thrifty. She does not want to spend more than \$450K. on her dream property

How we will find Nicole's dream property:

We will scout for properties in Seattle's vibrant neighborhoods, especially in zipcodes 98102, 98103, 98104, 98105, 98107, 98121 and 98122

If necessary, we will expand the property list with properties in adjacent central & up-and-coming zipcodes. However, the zipcodes need to be "well to do" (which we define as median household income > \$100K

As Nicole wants to move rather quickly, we will focus on neighborhoods with a high (annual) property rollover.

We will present properties that fill the two bedrooms/two bathrooms requirement

We will make Nicole aware of the fact that property prices north of Downtown Seattle have risen faster during the last 12 months than in other parts of King County

Insights Property Market Seattle (1 of 2)

King County has an active and fluid property market. During the period, the median property price was USD450K with a min of USD 78K and a max of 7,700K. Property prices and sales numbers differ by zip code

General insights

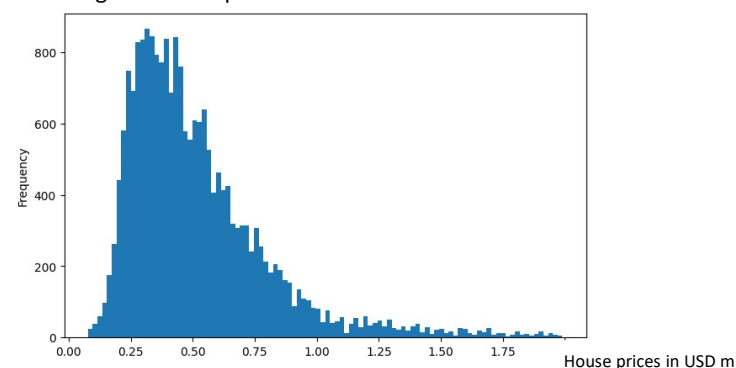
Median house price USD 450K, min USD 78K / max USD 7,700K

Average house price USD 540K

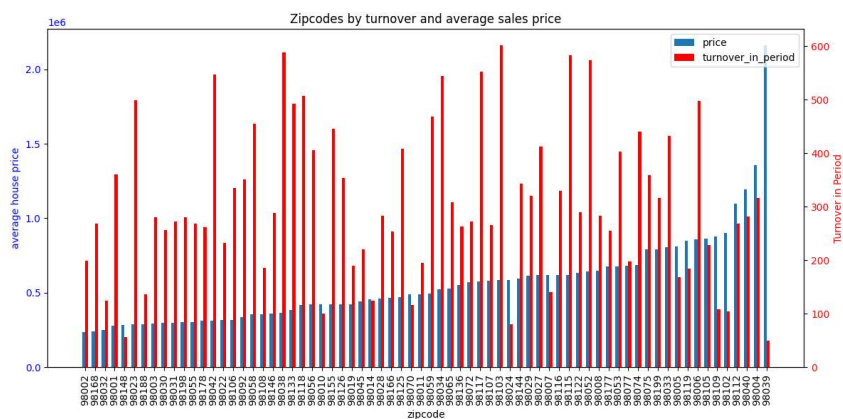
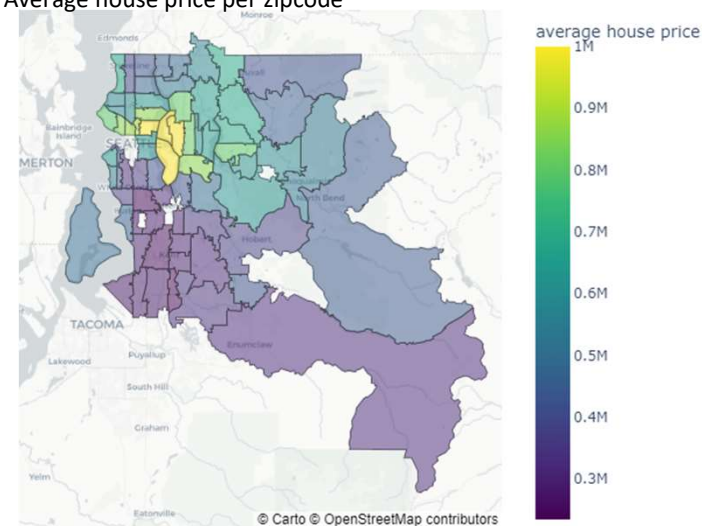
House prices North and North East of Downtown Seattle tend to be higher than in the South and South East

Property prices and sales numbers are zipcode dependent. However, it is not clear whether sales numbers depend on zipcode population density, zipcode socio-economic demographics or fashion

Histogram house price



Average house price per zipcode



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Insights Property Market Seattle (2 of 2)

King County has an attractive and diverse housing stock. Price deltas vary significantly between zipcode areas with North of Downtown Seattle as fastest rising area

Insights about property stock

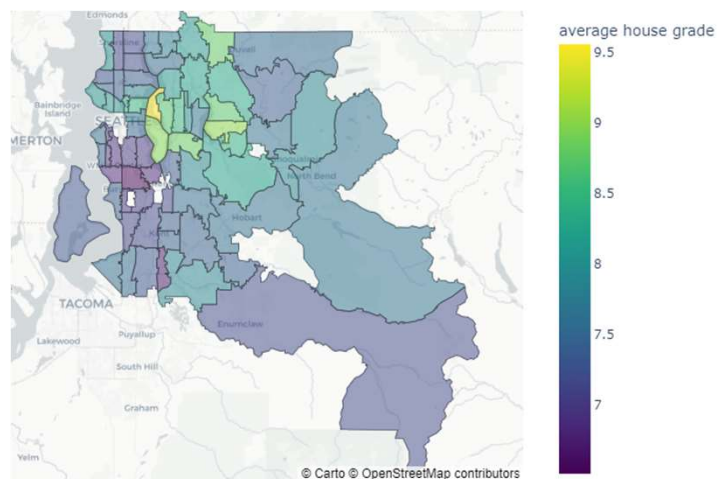
King County's housing stock is in average to above average condition

Property grades differ by zipcode

Properties to the North and Northeast tend to be of better grade than in the South and Southwest. This aligns with property pricing

density, zipcode socio-economic demographics or fashion

Average house grade per zipcode



Insights about price changes i

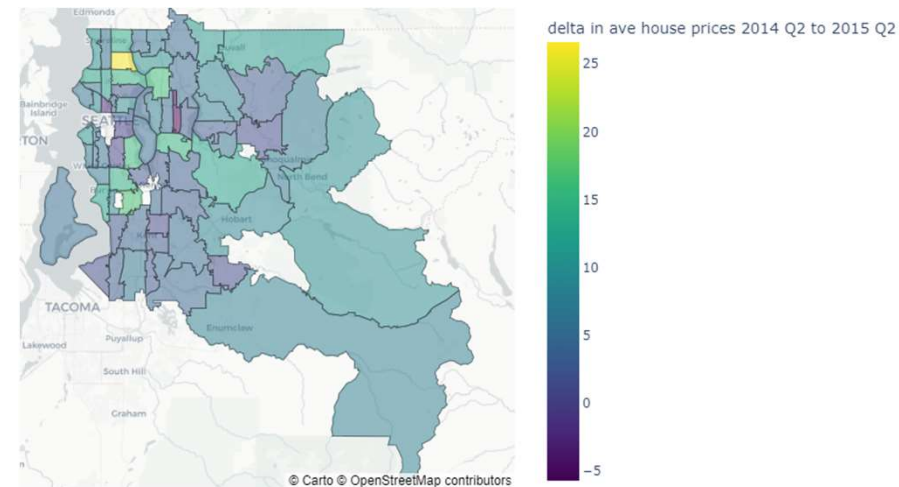
We assume that the data set is a proxy for price changes from 2014 Q2 to 2015 Q2 (actually May to Jul 2014 vs. Mar to May 2015)

Prices per sqft living area serve as proxy for property prices

Prices fluctuate significantly between zipcodes.

Zipcodes North of Downtown Seattle face the highest increase

Average sqft price change per zipcode in %



Property Search for Nicole (1 / 2)

Preferred zipcode areas

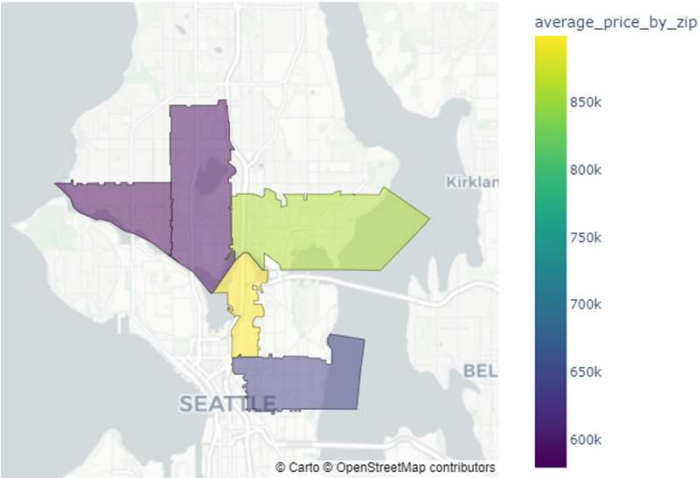
Nicole wants to live in sought-after zipcode areas

Ave property prices are too high for Nicole's budget of USD 450K

Search area needs to be expanded to stand a chance for finding the right property.

zipcode	ave price	turnover
98107	579.109	266
98103	585.048	602
98122	634.558	290
98105	863.229	229
98102	899.608	104

Average property prices in Nicole's preferred areas



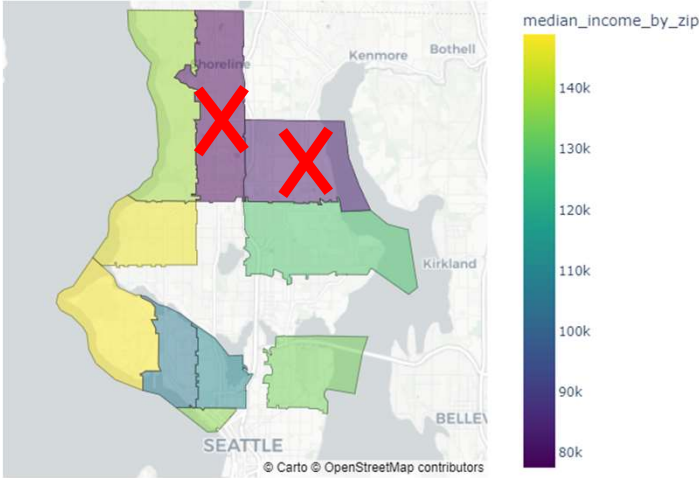
Search zipcode areas for Nicole

Nicole's search area is surrounded by different socio-economic neighborhoods

Nicole is quite picky and does not want to live in areas with low median household income

Therefore, only adjacent non-pink areas will be included in the search area

Median income of adjacent neighborhoods



Property Search for Nicole (2 / 2)

Analysis of search zipcode areas

An analysis of the target zip code areas by average property price leads to the conclusion that Nicole should concentrate on zipcode areas, 98103, 98107, 98117, and 98155.

These zipcode areas have relatively low average house prices and, in most cases, a high turnover.

As Nicole needs a relatively small property, the identified zip code areas might deliver.

zipcode	ave price	turnover
98117	756.835	553
98107	579.109	266
98103	585.048	602
98115	619.944	583
98122	634.558	290
98177	676.419	255
98199	792.187	317
98119	849.714	184
98105	863.228	229
98109	880.077	109
98102	899.607	104
98112	1.096.239	269

Recommended properties for Nicole

Searching the zipcodes identifies four properties.

We will suggest to Nicole to, at least, visit the properties in zipcode 98117, as they are recently built and potentially easier to maintain.

We will recommend to Nicole to act relatively quick, as the areas North of Downtown Seattle have seen higher than average property price rises, which we assume to continue.

zipcode	house_id	price	bed-rooms	bath-rooms	sqft_living	sqft_lot	floors	grade	yr_built
98117	9268200550	400.000	2	2	1520	5010	1.00	7	1999
98117	3693900245	445.000	2	2	1240	2500	2.00	7	1985
98155	7744500020	431.000	2	2	1390	12530	1.00	8	1959
98155	1568100730	325.000	2	2	1040	5796	1.00	6	1921