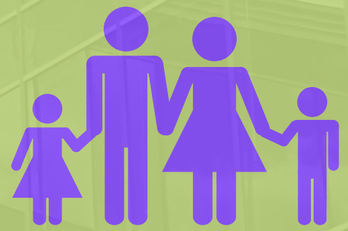
EDA PROJECT

KING COUNTY HOUSING

STAKEHOLDER

home buyer in King County

no money



family with 5 kids
social, family-friendly neighborhood

AT FIRST GLANCE

HOUSING IN KING COUNTY, WASHINGTON

- 21 597 sold property listings between May 2014 and May 2015
- buildings were constructed between 1900 and 2015
- most listings have 3 - 4 bedrooms and 1.75 and 2.5 bathrooms
- listings range between tiny apartments (35 sqm living area) and spacious mansions (1250 sqm living area)
- decent conditions: on a scale (1)-poor to (5)-very good, the average condition is 3.4
- fair construction: mean value 3.0 of (1)-poor to (5)-very good

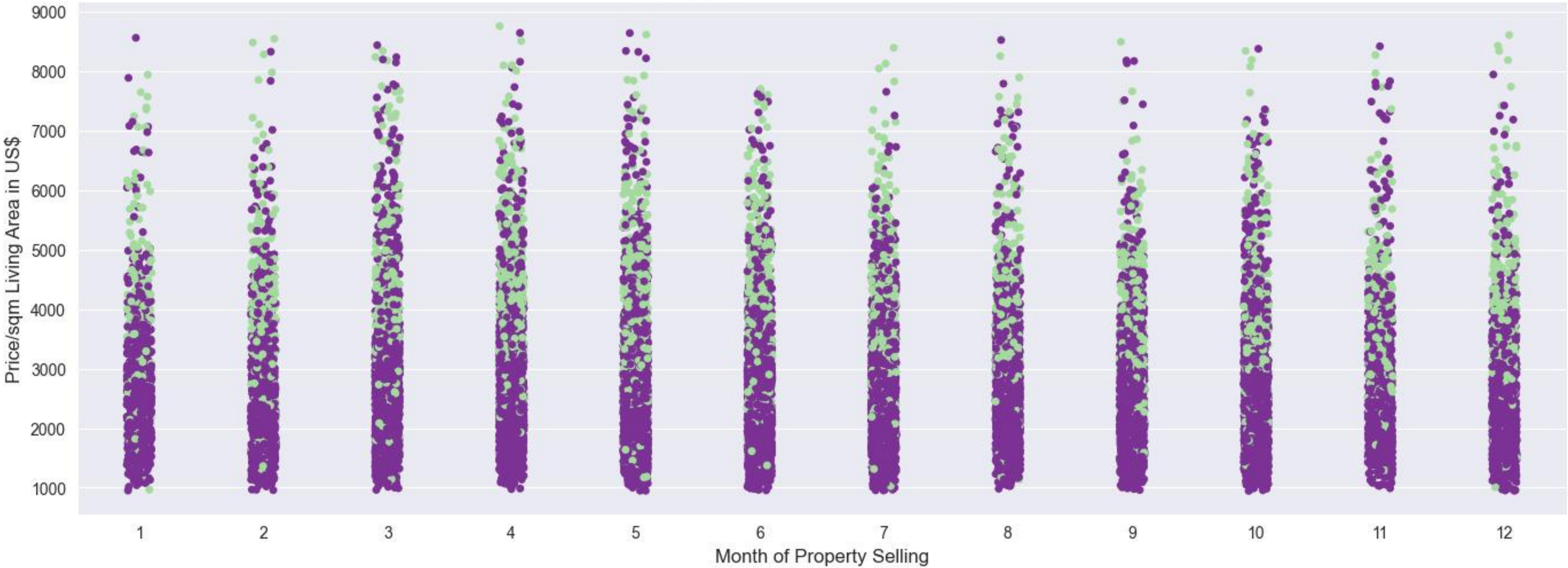
ADDITIONAL FEATURES

PRICE/SQUARE METER TOTAL	OVERALL CONDITION	CONSTRUCTION ASSESSMENT	DESIRED NEIGHBORHOOD
square meter total includes living area and 25% of the lot area	(1)-poor to (5)-very good	(1)-poor to (5)-very good	best zipcodes for families: ratings of public schools, cost of living, crime rates, family amenities, diversity, percent of children below poverty - based on US Census

THE LARGER THE PLACE, THE HIGHER THE PRICE

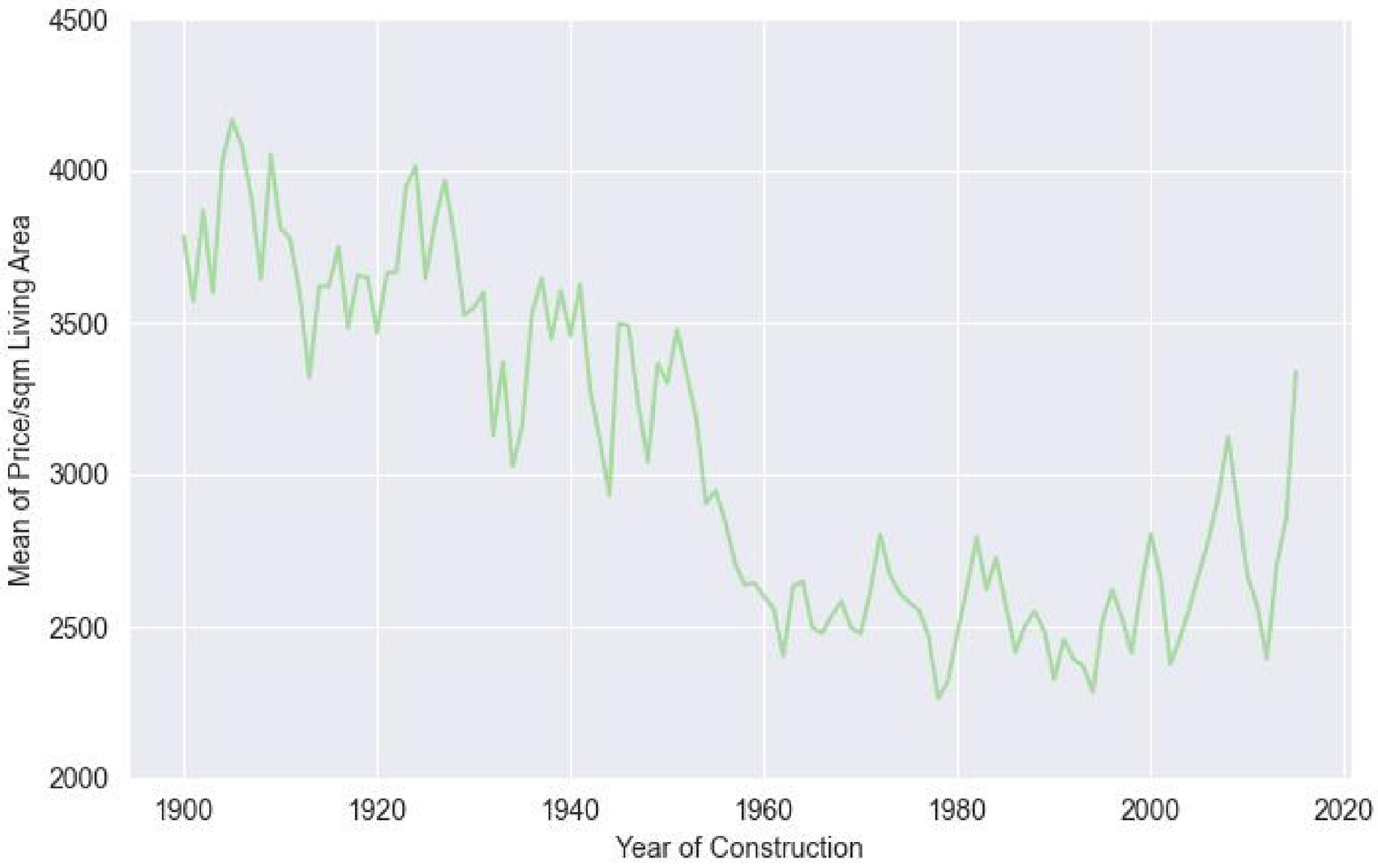
Pearson's r: 0.70 ($p < 0.05$)

LOCATION, LOCATION...



- desired neighborhoods - mean price/sqm living area: 3.623 $
- other areas - mean price/sqm living area: 2.616 $

YEAR OF CONSTRUCTION EFFECTS ON PRICE



mean price/sqm for buildings constructed before 1950: 3561 $

mean price/sqm for buildings constructed after 1950: 2640 $

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CRITERIA

- LOWER 15% OF PRICE RANGE FOR SQM LIVING AREA
- SOCIAL, FAMILY FRIENDLY NEIGHBORHOOD
- AT LEAST 6 BEDROOMS
- GOOD CONDITION (>= 4)
- GOOD CONSTRUCTION (>= 4)

feasibility: at least 100 matching listings in data set to assume feasibility to buy equal property within a reasonable amount of time.

MATCHES IN DATA

- NONE

BEDROOMS IN LISTINGS

STAKEHOLDER

ADJUSTED CRITERIA

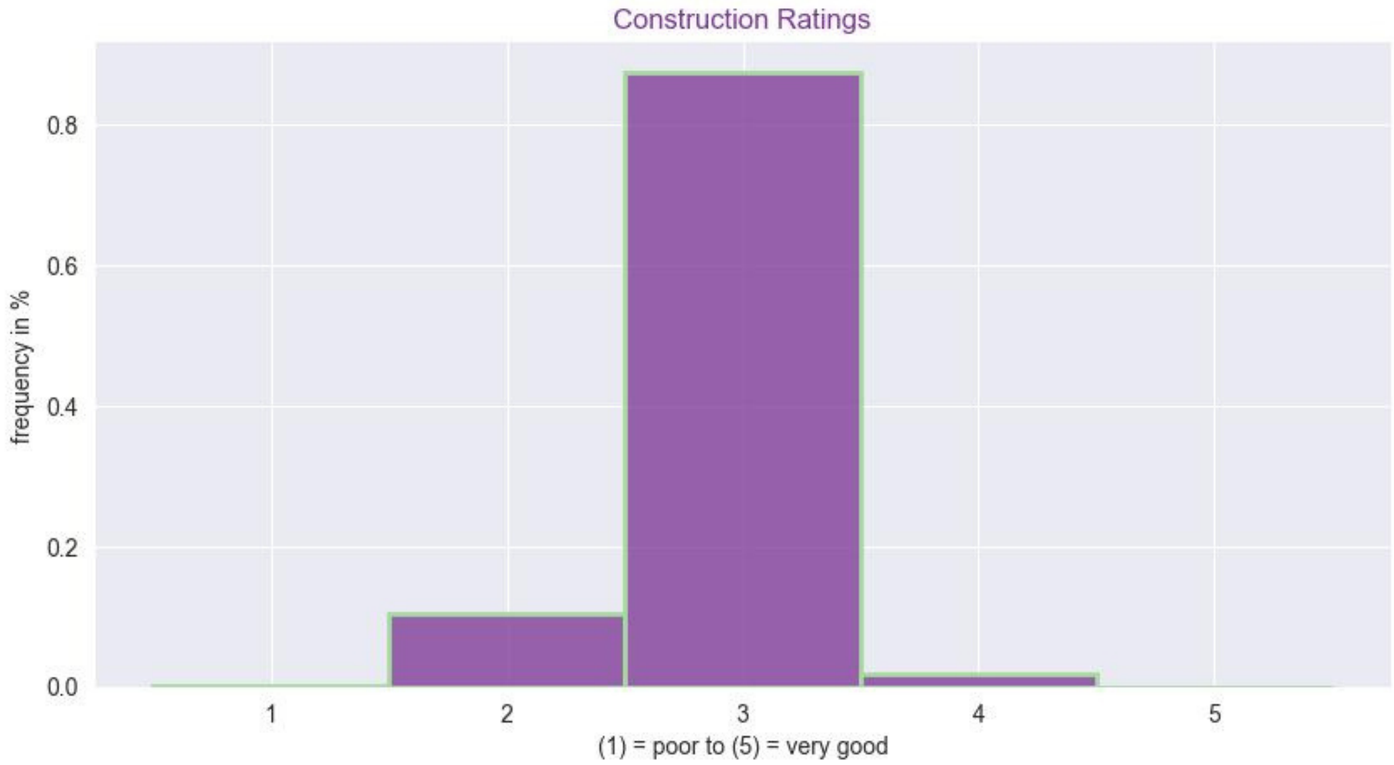
- LOWER 15% OF PRICE RANGE FOR SQM LIVING AREA
- SOCIAL, FAMILY FRIENDLY NEIGHBORHOOD
- AT LEAST 4 BEDROOMS AND 120 SQM LIVING AREA*
- GOOD CONDITION
- GOOD CONSTRUCTION

*sufficient space for 7 tenants (World Health Organization Overcrowding Prevention)

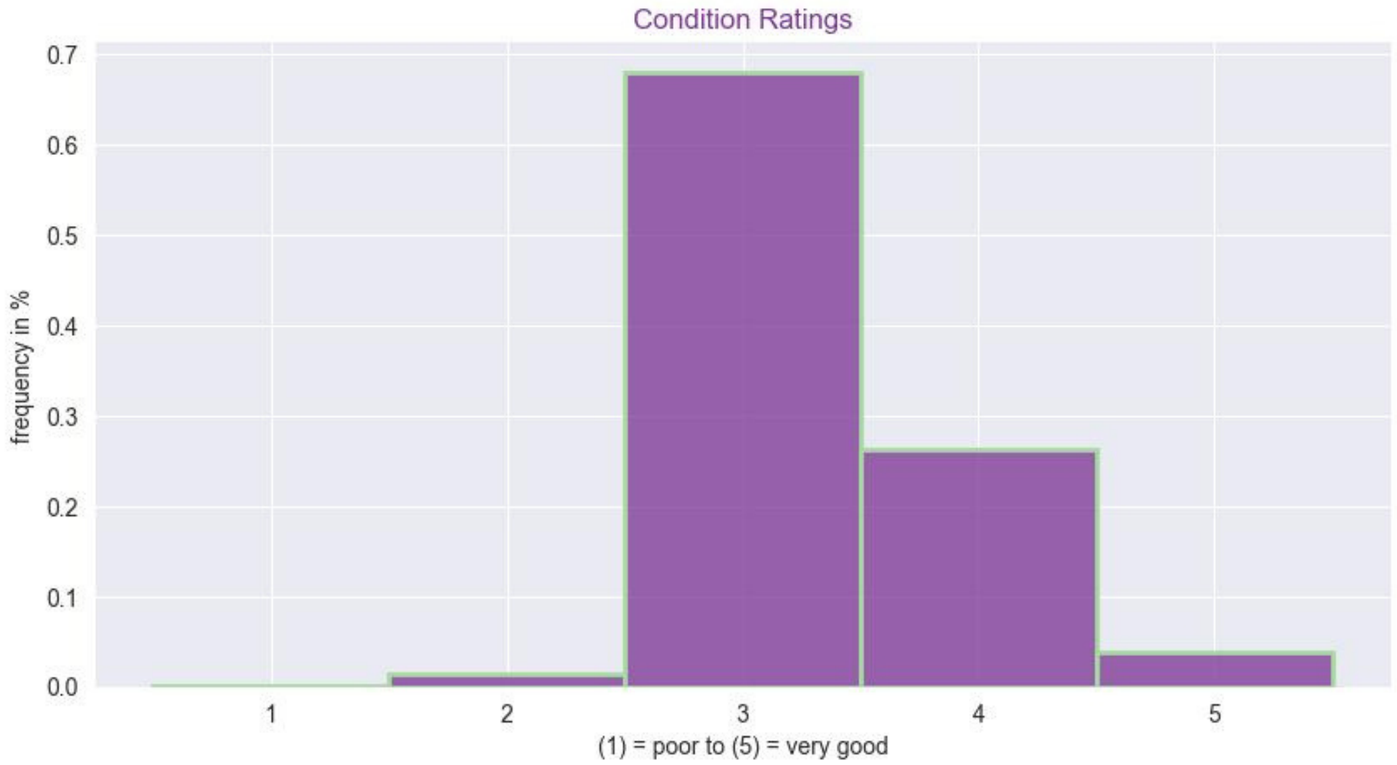
MATCHES IN DATA

- 3

CONSTRUCTION OF HOUSES



CONDITION OF HOUSES



STAKEHOLDER

ADJUSTED CRITERIA

- LOWER 15% OF PRICE RANGE FOR SQM LIVING AREA
- SOCIAL, FAMILY FRIENDLY NEIGHBORHOOD
- AT LEAST 4 BEDROOMS AND 120 SQM LIVING AREA
- FAIR CONDITION (>= 3)
- FAIR CONSTRUCTION (>= 3)

MATCHES IN DATA

- 69

STAKEHOLDER

ADJUSTED CRITERIA

- LOWER 15% OF PRICE RANGE FOR SQM LIVING AREA
- SOCIAL, FAMILY FRIENDLY NEIGHBORHOOD
- AT LEAST 3 BEDROOMS AND 120 SQM LIVING AREA (SHARED BEDROOMS/ SEPARATING WALLS)
- FAIR CONDITION (>= 3)
- FAIR CONSTRUCTION (>= 3)

MATCHES IN DATA

- 115

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RECOMMENDATIONS

- LOWER 15% OF PRICE RANGE FOR SQM LIVING AREA
- SOCIAL, FAMILY FRIENDLY NEIGHBORHOOD
- >= 3 BEDROOMS, 120 SQM LIVING AREA
- FAIR CONDITION (>= 3)
- FAIR CONSTRUCTION (>= 3)
- LOOK THROUGHOUT THE YEAR
- HOUSES BUILD BETWEEN 1950-1990
- BE PATIENT

FUTURE WORK

FUTURE WORK

WHAT'S HAPPENING?

Gentrification:

- socioeconomic process of changing the character of a neighborhood through influx of residents with higher income.
- Gentrification significantly decreases cultural and demographic diversity and results in displacement of low-income groups.
- Gentrification leads to geographically separated poor vs. rich communities.

FUTURE WORK

PREDICTING GENTRIFICATION

- early warning system for gentrification through predicting house prices by neighborhood
- https://urbanspatialanalysis.com

EDA PROJECT

THANK YOU!