Time Series Modeling

Phase 4 Project

By Kristen Davis

ABOUT THE PROJECT

OVERVIEW

This project uses housing data from Zillow and Time Series modeling to advise a client on the bes'tzip codes to invest in .

This project showcases technical skills such as Pandas, , proficiency with Time Series, and ARIMA modeling as well as soft skills such as domain knowledge, data driven insights and strong analysis.

01.
BUSINESS SCENARIO

Client profile & success criteria

02.
MARKET OVERVIEW

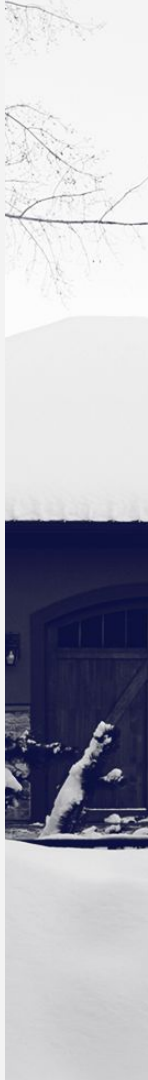
Area information and insight

03.
MODEL FORECAST

Zip code price predictions

04.
RECOMMENDATIONS

Best zip codes for investment



BUSINESS SCENARIO

CLIENT PROFILE

InvesTEX

A Dallas/ Fort Worth Metroplex investing group looking for single family homes to acquire as value based investments. Assets will be acquired, renovated and sold in an 18-36 month time frame and are targeting highest possible yield.

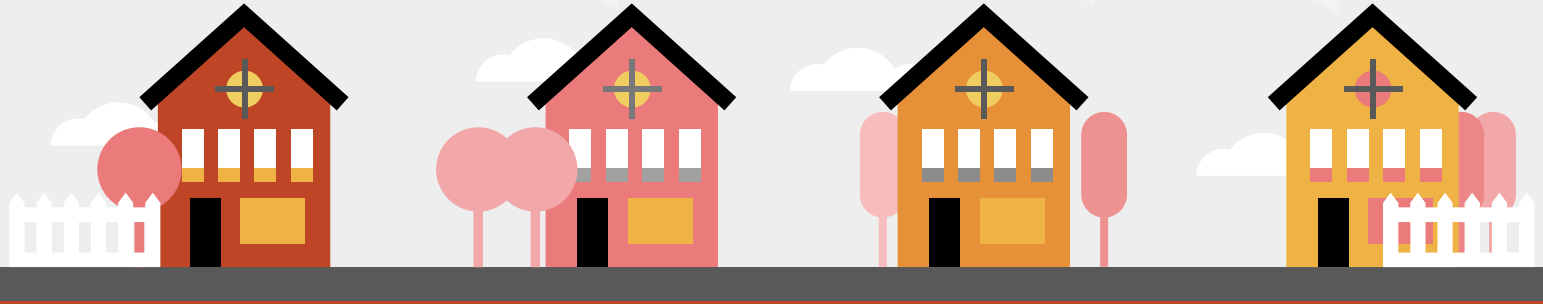
METRICS FOR RECOMMENDATION

Houses located within the Dallas/Fort Worth Metroplex

Within or near a high performing school district

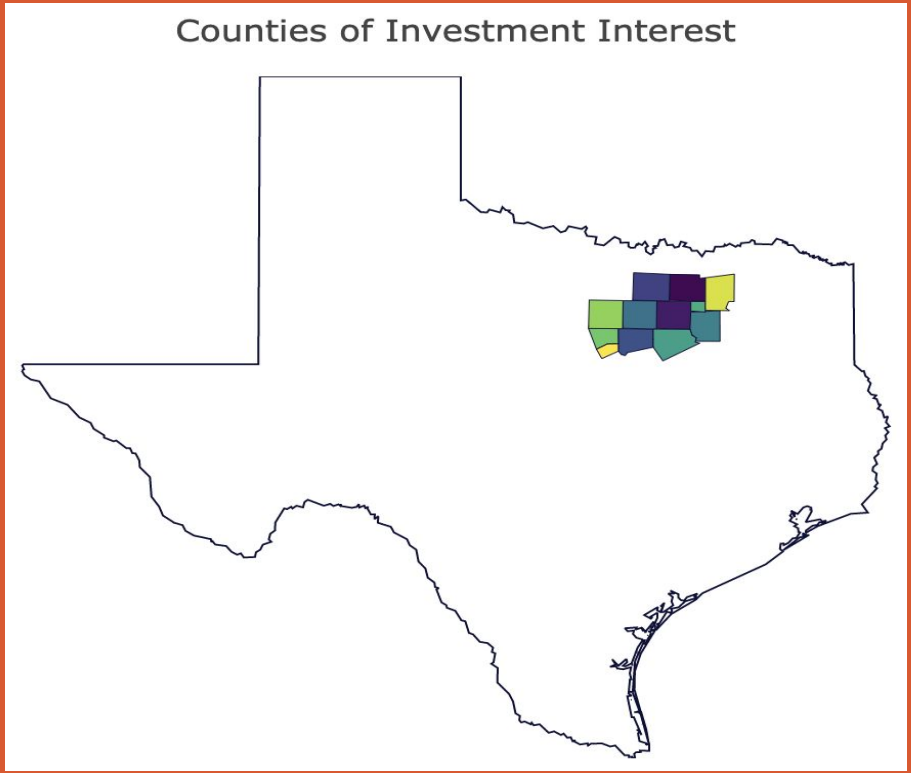
Forecast home values 18 - 36 month timeline

Identify highest yield ROIs



MARKET OVERVIEW

LOCATIONS

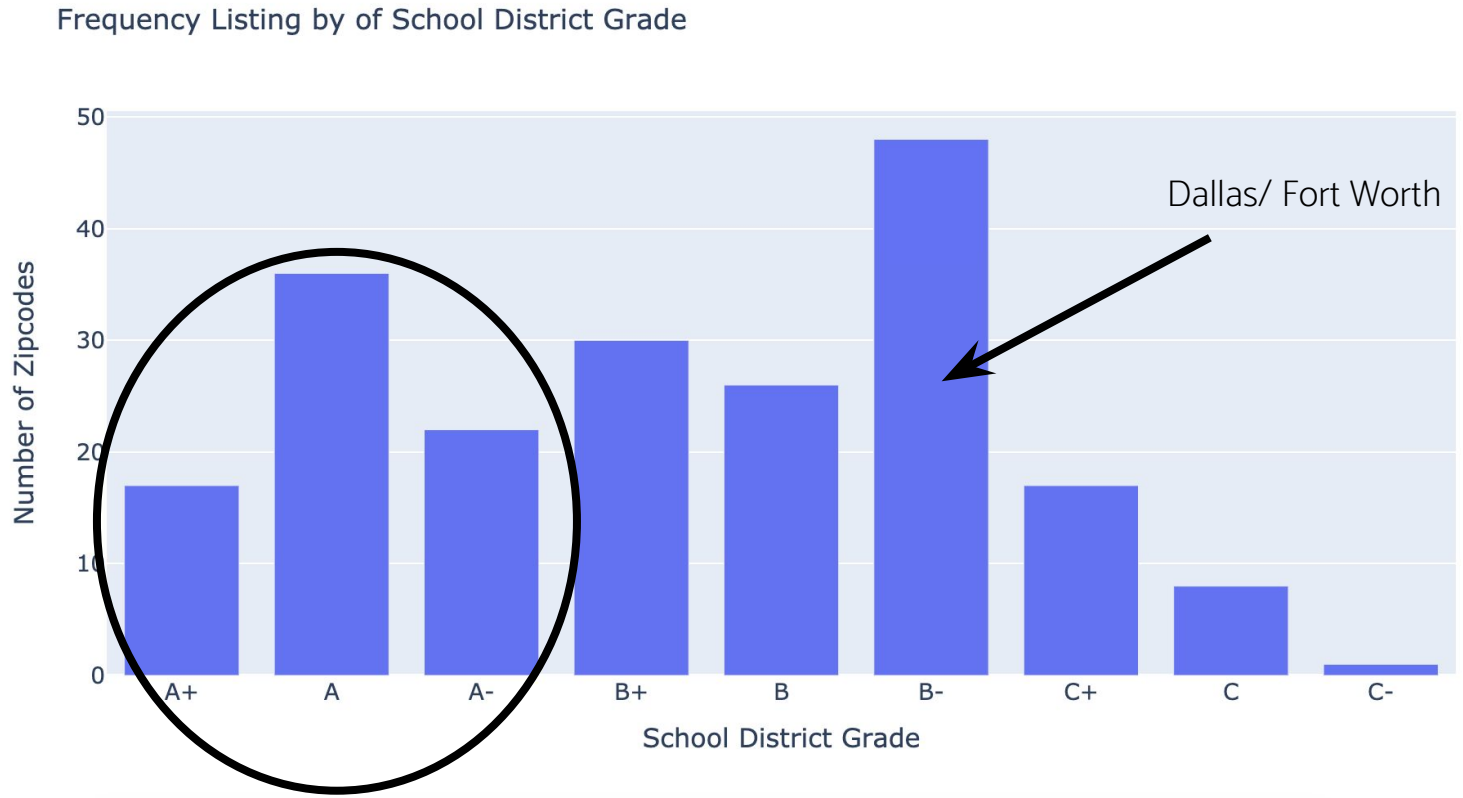


Dallas/ Fort Worth Metroplex consists of 11 countries located in the North/ East of the State of Texas

Percentage of Overall Home Sales by County

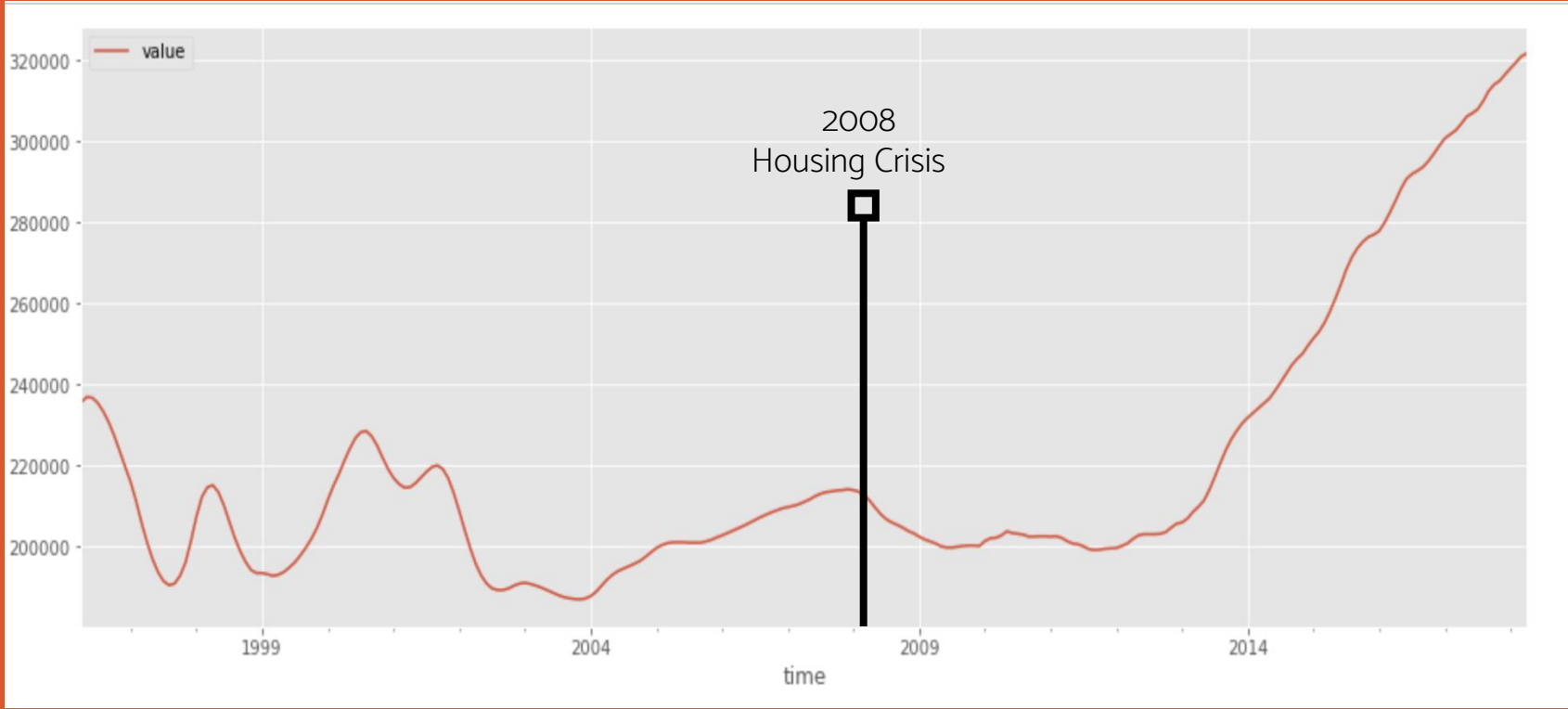
Tarrant County	28%
Dallas County	33%
Denton County	11%
Collin County	11%

Criteria Metric: High Performing School District

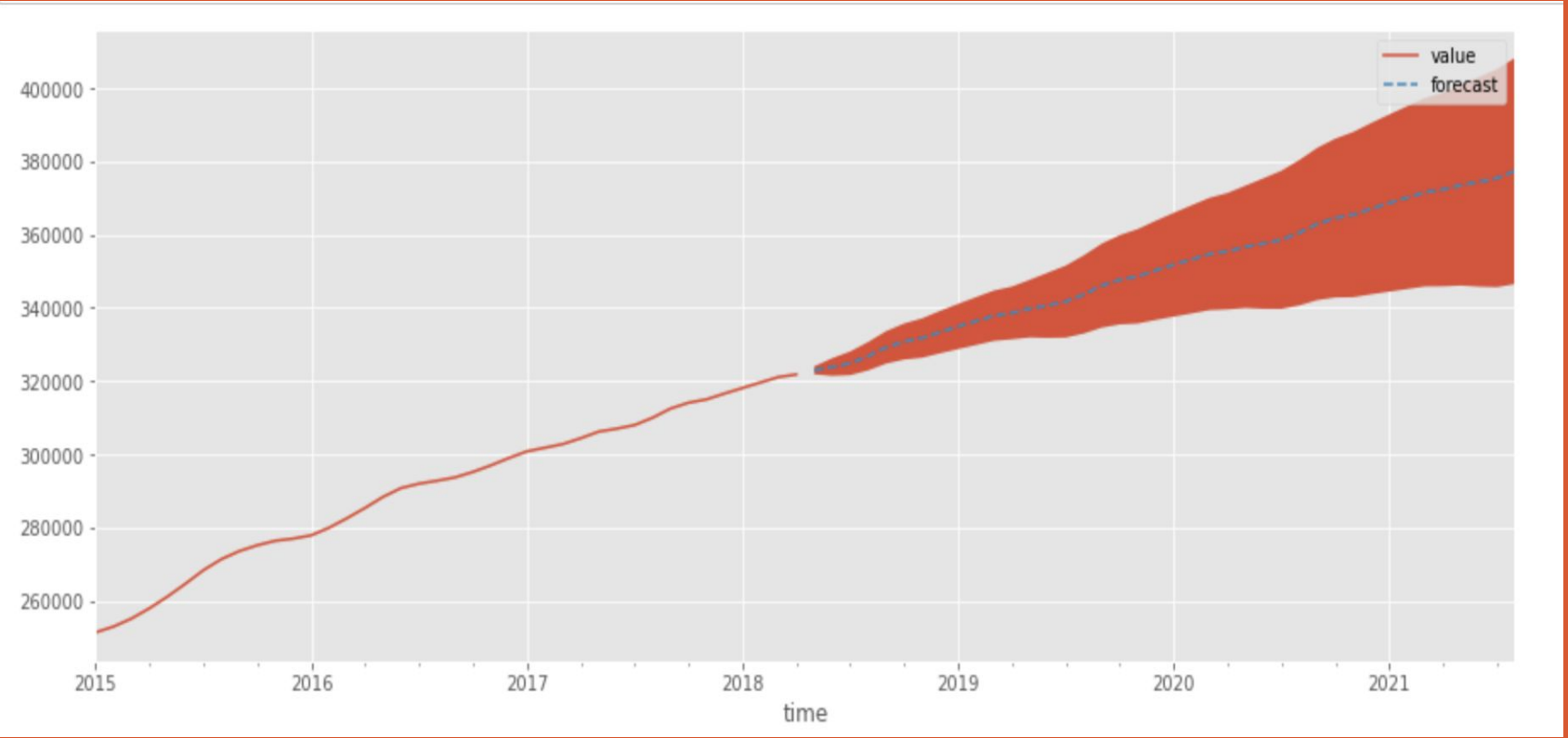


MODEL FORECAST

A Slice of Housing Price Data - Dallas



Example - Zipcode Forcast



RECOMMENDATIONS

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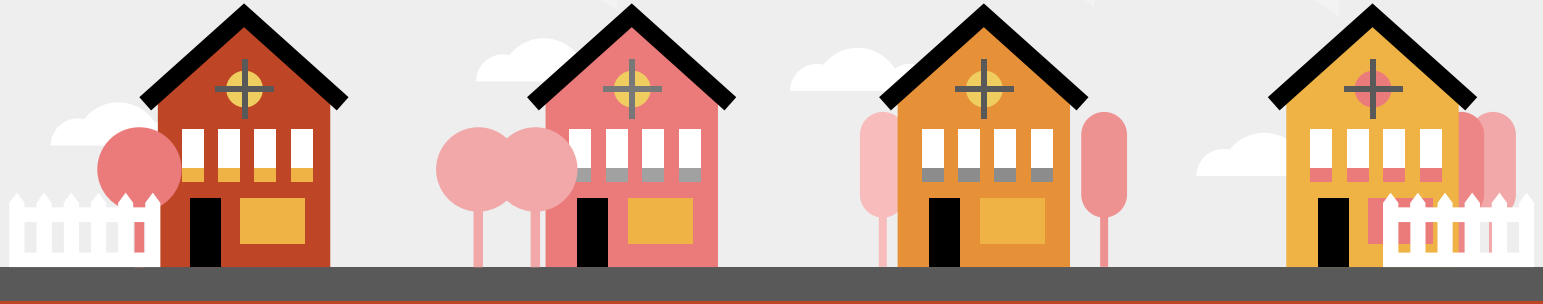
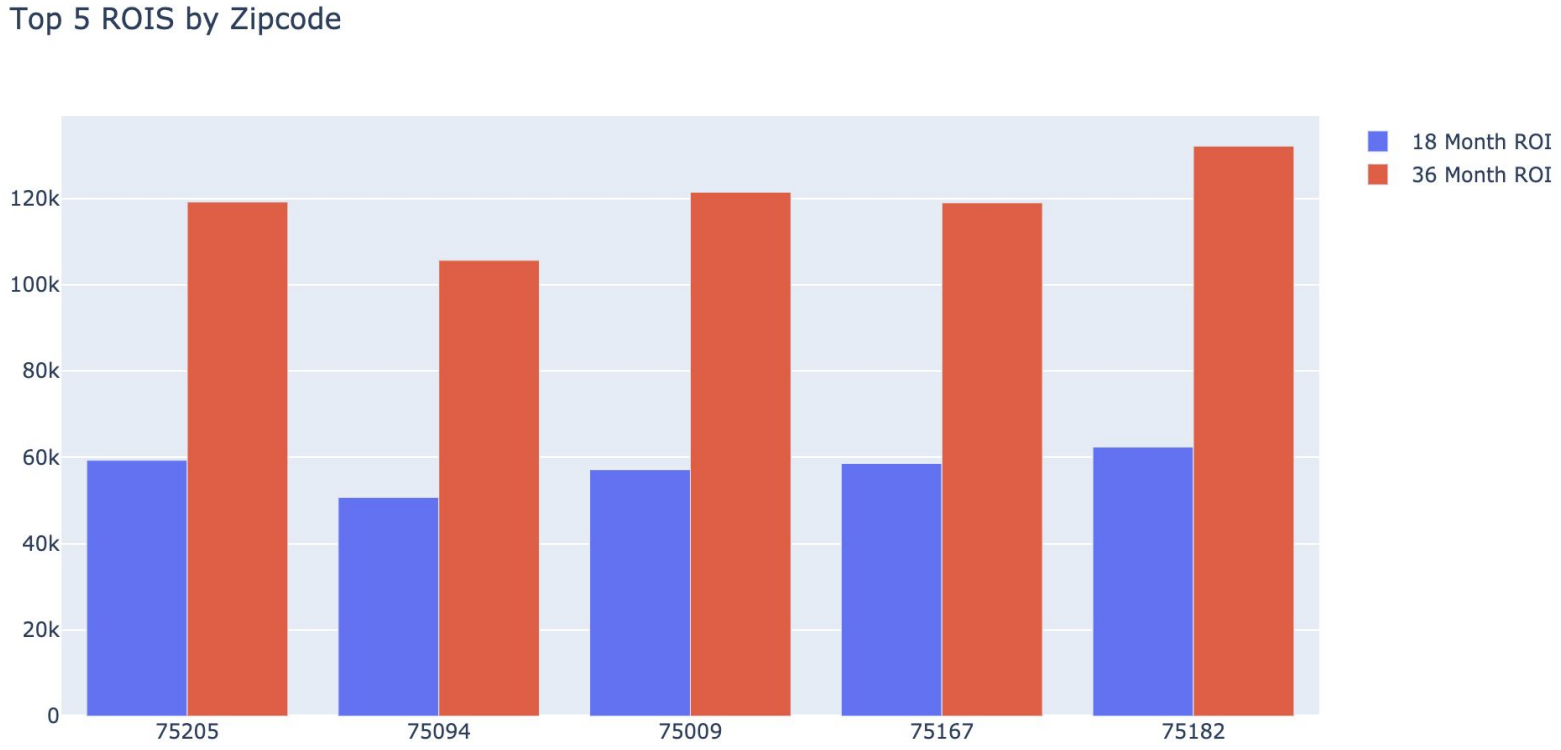


Top 5 Zipcode Buys



FUTURE PROJECTS

Expand Considered Data

Look at houses with similar criteria outside of the Dallas/ Fort Worth Metroplex

Consider Addition Features

Include additional factors such as lot size into prefiltering

Adjust Forcast Window

Look at what zipcode yeilds would be at various intervals

THANKS!

Do you have any questions?

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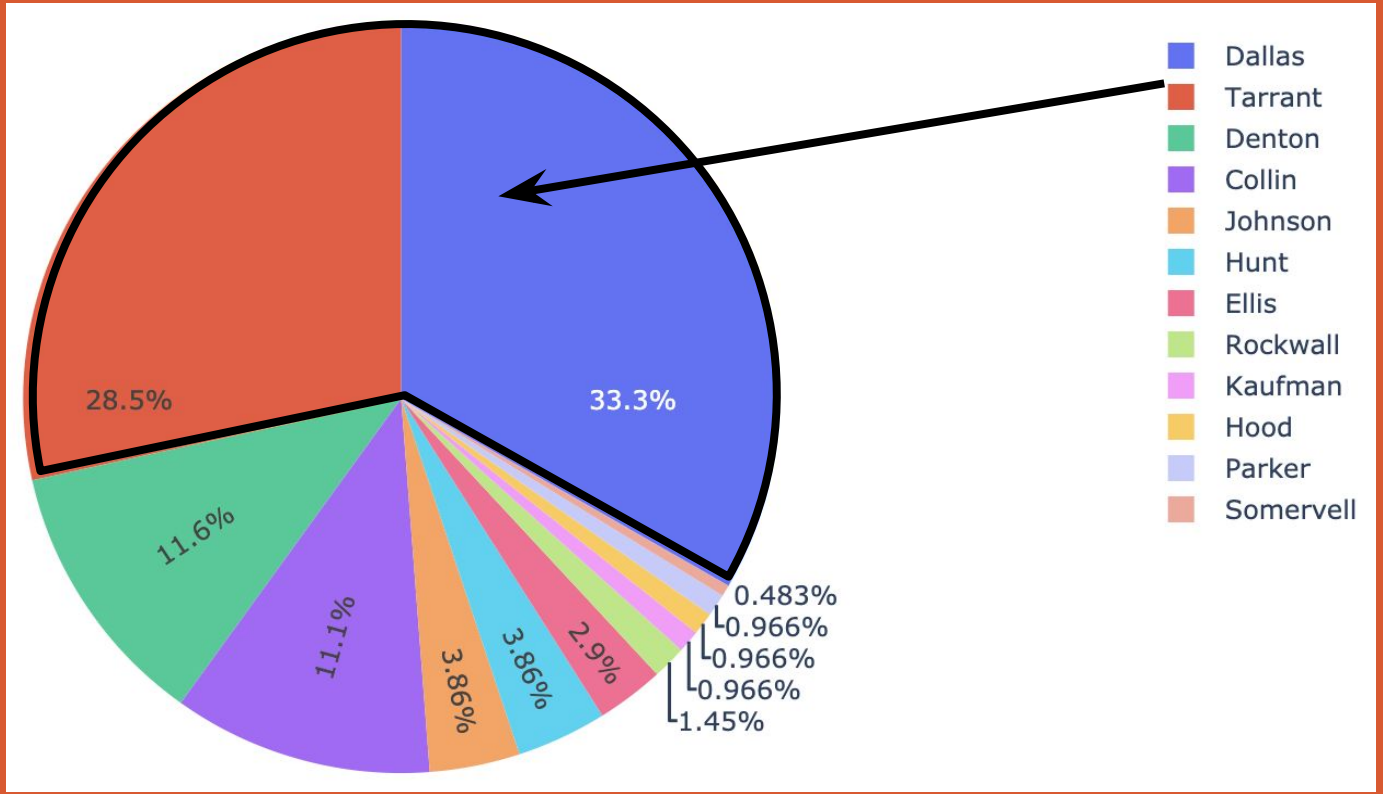
On GitHub

CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon**, and infographics & images by **Freepik**

APPENDIX

Percentage of Zip Codes by County



Best Zip Codes - Buy/ Sell/ ROI/ High/ Low

RegionName	2018-04	2019-10-01	2021-04-01	18mo_roi	36mo_roi	2021-high	2021-low	2019-high	2019-low
75205	1268600	1327901.00	1387747.00	59301.00	119147.00	1830529.00	9449647.00	1509435.00	1146367.00
75094	378000	428704.15	483634.49	50704.15	105634.49	638137.17	329131.82	495212.63	362195.66
75009	359200	416306.34	480611.43	57106.34	121411.43	560386.42	400836.44	452716.42	379896.26
75167	283700	342255.76	402647.10	58555.76	118947.10	496489.42	308804.78	384420.76	300090.76
75182	395800	458162.45	527892.47	62362.45	132092.47	92536050.00	130424.46	62224720.00	294077.65

RESOURCES

PHOTO

- Contemporary building with angular roof
- Modern bathroom interior design
- Modern minimalist living room with leather sofa and fireplace
- Snowy country house in winter
- Front view of brown leather big couch
- Messy desk in office
- Close-up modern industrial staircase
- Contemporary black building exterior with balconies
- Modern living room with painted wall
- Glasses and book near flowers and mug on table
- Brick old building exterior
- Close-up elegant modern armchair
- Kitchen with vintage furniture
- Modern elegant living room with fireplace
- Close-up elegant modern armchair and stool
- Smiling young male colleague looking each other
- Girl smiling with balloons while her boyfriend carries her on her back
- Modern living room design with a tv

ICON

- Real Estate