



Best Zipcodes for Investment

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Hello everyone, thank you for showing up for presentation. This is Hyungjun Kang. I will be going over presentation for top 5 zip codes for investment.

About the Project

Short Term Investment

- 5 years period relatively short term investment.
- Property will be listed market on May of 2021.

Investment Strategy

- Inflation hedge investment.

Data

- Sourced from Zillow.com.
- Consist of average value of the zipcodes, April 1994 – April 2018.

Assumptions

- Buying with 100% cash.
- All fixed up properties.
- No vacancy period.
- Data from 2008 - 2018

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5 zipcodes will be selected for short term investment. Investment strategy is inflation hedge investment which meaning profit will come from holding the property over 5 year inflation. Dataset from Zillow.com was used to build forecast model. Couple of assumptions were made for the model. Investor will buy with 100% cash down for the property, properties are all fixed up so no need to worry about fixing or maintaining it for duration of 5 years, and there's no vacancy period during 5 years.

Business Value

1. Finding Guaranteed Return

2. Minimizing Risks

3. Valuable information

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With this project, investors will have guaranteed positive return with minimized risks. This forecast model can be used for other applications.

Methodology

- Time Series Forecasting using Zillow data source.
- Future value estimated by ARIMA model.
- Scoring system to select best potential zipcodes.

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For methodology, time series model was built based upon Zillow.com data, known as ARIMA model. Scoring system was used to pre-select zipcodes.

Risk Management

1. Uncertainty of profit

- By ARIMA model, profit is guaranteed.
- Only zipcodes with increased value were selected.

2. Bad Renters

- Unemployed rate was reflected for choosing zipcodes.
- Shows zipcodes with good job security.

3. Lack of Liquidity

- Zipcodes with positive population was selected.
- Positive population proves increase of demand

4. Concentration Risk

- Multiple zipcodes will be selected to minimize the risk.

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Many different methods were used to minimize risks. For uncertainty of profit, ARIMA model was used to find only positive ROI zipcodes. It will guarantee positive gain. After the initial purchase, the property will be rented. For no vacancy period, zipcodes with low unemployment will be selected. In order to sell the property at the end of 5 years period, zipcodes with growing population will be selected. Putting all the money into one thing is always bad. There're 5 zipcodes so that investors can make their own portfolio.

Scoring System

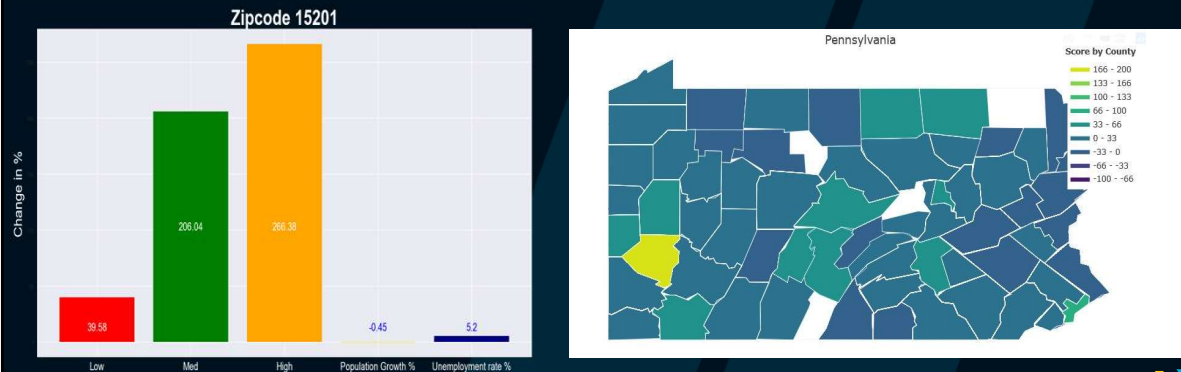
- Inflation X 1.2
- Unemployment Rate X -1
- Population Growth X 2
- Median Property Tax X 500

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To score each zip codes, inflation percent times 1.2, unemployment percent times negative one, population growth times two, median tax property times 500.

#1 15201 Pittsburg, PA

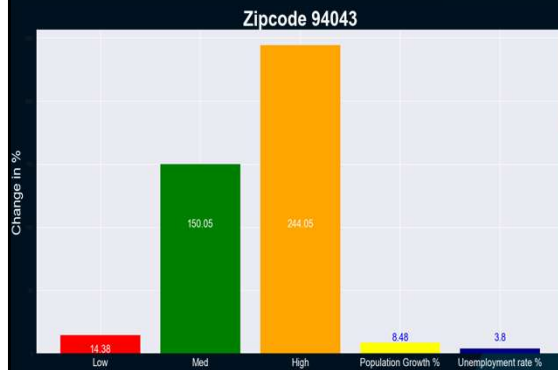
1.35% Property Tax



As a result, number 1 zipcode is Pittsburg, PA with 206% medium ROI

#2 94043 Mountain View, CA

0.74% Property Tax

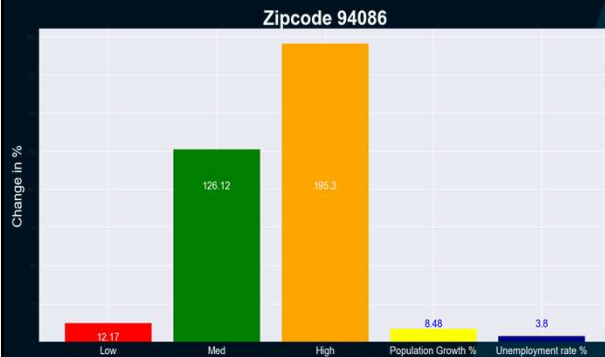


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#2 zipcode is Mountain View, CA with 150% ROI.

#3 94086 Sunnyvale, CA

0.74% Property Tax

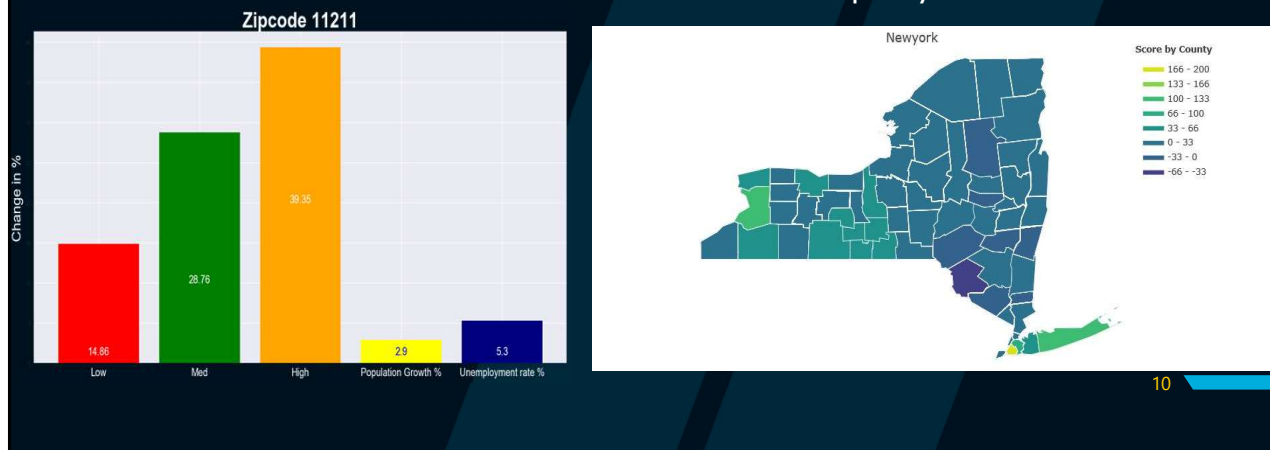


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3rd zipcode is 94086 Sunnyvale, CA with 126% ROI.

#4 11211 Williamsburg, NY

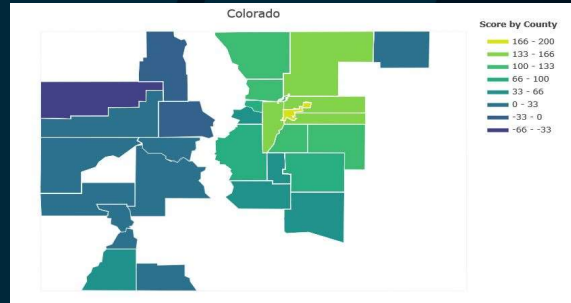
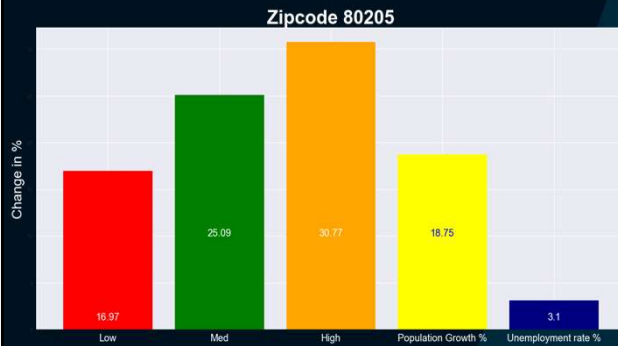
1.2% Property Tax



4th zipcode is 11211 Williamsburg NY with 28.76% ROI.

#5 80205 Denver, CO

0.64% Property Tax



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#5 Zipcode is 80205 with 25% ROI.

Forecast

Example for median growth

	2018	2023
Zipcode 15201	\$217,800	\$666,468
Zipcode 94043	\$1,438,700	\$2,158,050
Zipcode 94086	\$1,554,200	\$1,958,292
Zipcode 111211	\$985,400	\$1,241,604
Zipcode 80205	\$478,300	\$597,875

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These are forecast of median house prices after 5 years.

Recommendation

Select Zipcode with Right Budget

- Forecast is based upon on 100% cash buy.
- Any of the zipcdoe will bring positive ROI.
- Investing in more than one area for lower risk.

Hold on to the Property for 5 years

- Selling the property before 5 years will give lower ROI.

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For recommendations for investors, most important thing would be selecting zipcodes with right budget if investor is going to have only one property. And make sure to hold on to the property for five years before selling it.

Future Work

Different Buying Option

- New forecasting model with 20% down payment.
- More criteria will be incorporated.
- Property will be listed market on May of 2021.

Demand Forecast

- Population growth doesn't equal to increase in demand
- Demand forecast using Census API

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For future work, I would like to build a forecast model with different buying option. Most of people buy house with 20% downpayment and get mortgage. This would be more realistic way of invest for common people. Secondly, I would like to look into actual buying power analysis for houses. Not everyone is looking into buy houses these days. Looking into Census data will help to increase accuracy of the forecast



Thank you for your attention. If you have any questions, feel free to ask now. Thank you!