



# Zillow Investments

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**Time-Series  
Analysis**

# Our Goal

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- ① Find zipcodes that have the highest ROI
- ② Select 5 zip codes to invest \$90 - \$110k
- ③ Predict the price of properties in zip codes 2 years ahead

# The Data

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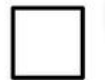
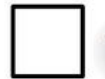


- 14723 properties in the original dataset
- little missing data, data provided by Zillow.
- 'Metro' has missing values but not needed

# Criteria for investing in property

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## *CHECKLIST*



- Price is between \$90K - \$110K
- Relative Standard Deviation / Coefficient of Variance of price in 0.6 quartile

# Zip codes to invest in

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Zipcode: 14889, City: Van Etten - ROI: 0.28

Zipcode: 74726, City: Bokcito - ROI: 0.85

Zipcode: 14304, City: Niagra Falls - ROI: 0.26

Zipcode: 37722, City: Cosby - ROI: 0.21

Zipcode 65723, City: Pierce City - ROI: 0.90

# Risks

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- Unknown global financial crisis can cause drastic price drops
- Time taken to sell a property can mean investment is tied up longer than desired
- Crime rate, natural disasters, local politics can have negative impact on property prices



# Conclusion

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- ① 'Black Swan' events can't be predicted
- ② Property prices generally trend up
- ③ Buy high performing properties and look at selling on shorter time frames

# Future Work

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- 1 Incorporate additional datasets along with neural networks for better timing
- 2 Look at investing in more liquid financial instruments that are traded for frequently to reduce risk and improve model





THANK  
YOU