Baltimore Real Estate Investment

By Seth Chart

Problem Statement

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- Our client is an individual homebuyer who is moving to Baltimore Maryland.
- Our client plans to buy a single family home in the city of Baltimore, live in the home for two years, then sell the home.
- They want to select a house in a zip code that will maximize their expected return on investment.
- Our task is to identify the five best zip codes within the city of Baltimore for this type of investment.

Business Value
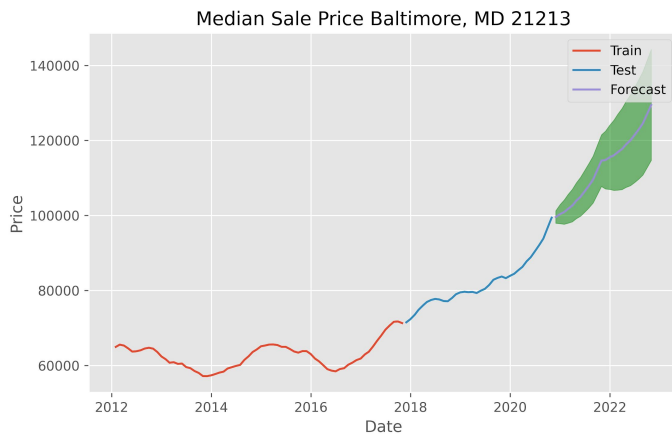
Business Value

PLAN of BALTIMORE.
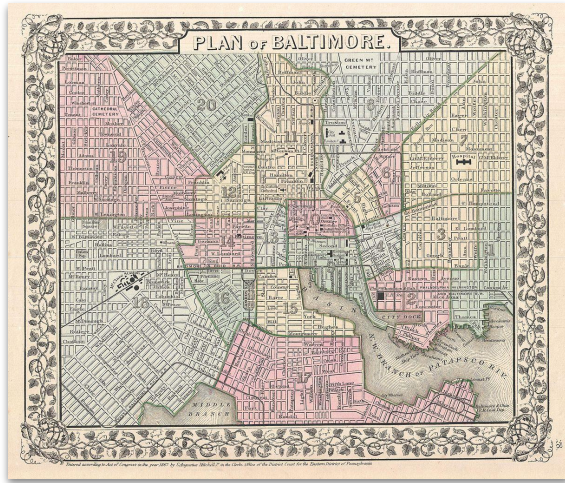
By identifying the five zip codes that are best suited to our client's investment strategy we expect to provide the following outcomes:

- Maximize return on investment by identifying zip codes with favorable property cost trends.

Methodology

Methodology

Median Sale Price Baltimore, MD 21213

- Collect historical median sale price by zip code from Zillow.
- Fit a time series model for each zip code in Baltimore.
- Use models to forecast median sale price for each zip code two years into the future.
- Select five zip codes with highest forecasted return on investment.
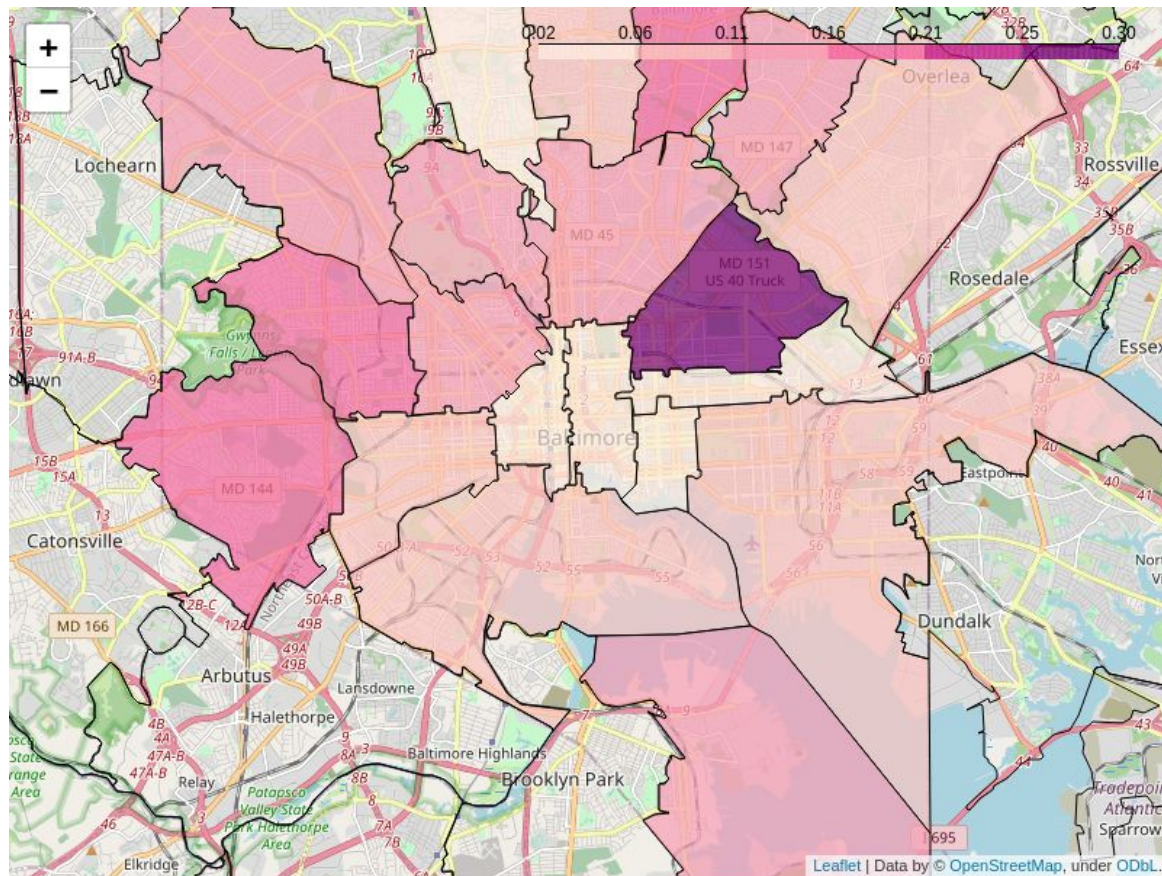
Map of Baltimore zip codes indicating projected return on investment.
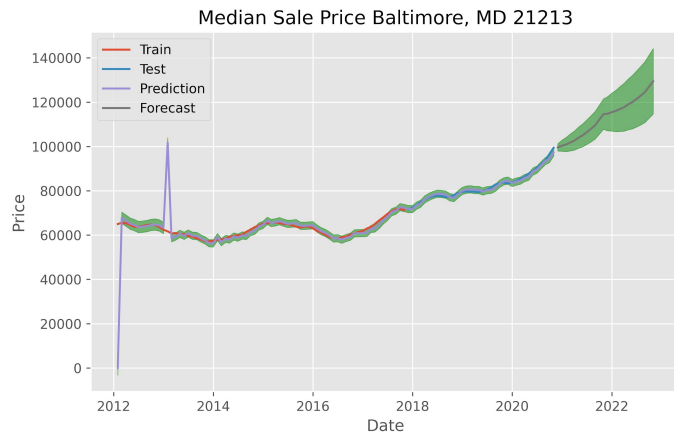
Recommendations

Best Zip Code: 21213

Belair-Edison Neighborhood:

- Median Sale Price: $99,420
- Forecast Median Sale Price: $129,461
- Two Year ROI: 30%
- Main Attraction: Herring Run Park

Best Zip Code: 21213

Median Sale Price Baltimore, MD 21213

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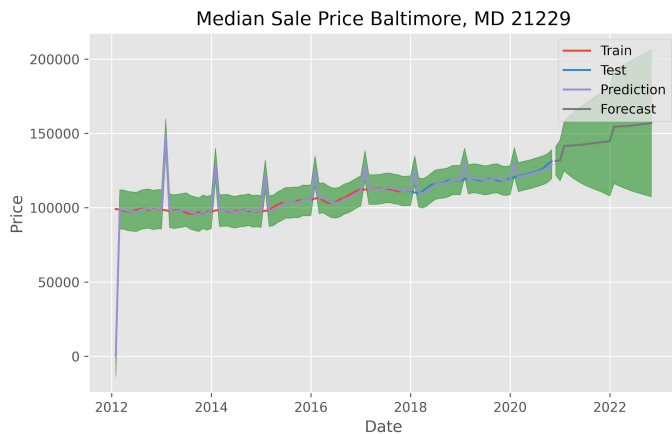# Second Best Zip Code: 21229

Irvington Southwest Baltimore:

- Median Sale Price: $131,301
- Forecast Median Sale Price: $157,004
- Two Year ROI: 20%
- Main Attraction: Gwynns Falls Park

Second Best Zip Code: 21229

Median Sale Price Baltimore, MD 21229

Irvington Southwest Baltimore:

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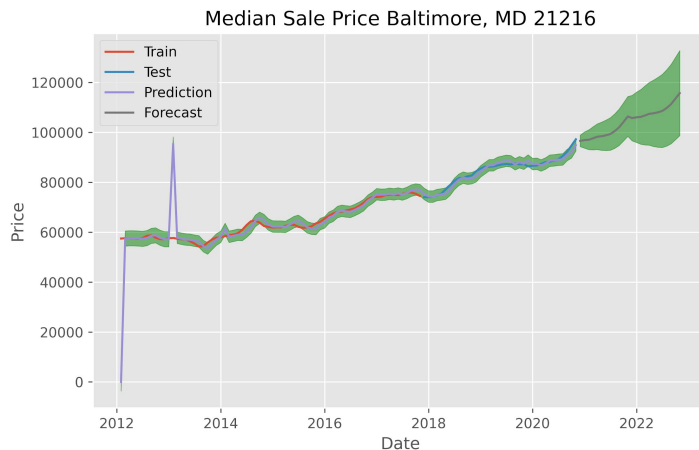- Two Year ROI: 20%
- Main Attraction: Gwynns Falls Park

Third Best Zip Code: 21216

Hanlon Longwood Neighborhood:

- Median Sale Price: $97,222
- Forecast Median Sale Price: $115,741
- Two Year ROI: 19%
- Main Attraction: Hanlon Park

Third Best Zip Code: 21216

Median Sale Price Baltimore, MD 21216

Hanlon Longwood Neighborhood:

- Median Sale Price: $97,222
- Forecast Median Sale Price: $115,741
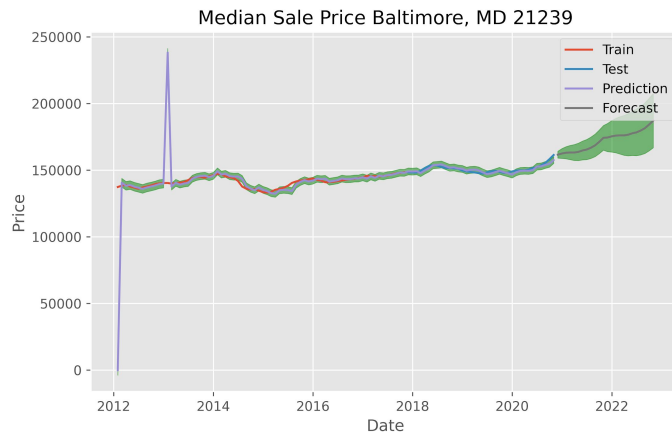- Two Year ROI: 19%
- Main Attraction: Hanlon Park

Fourth Best Zip Code: 21239

Idlewylde Neighborhood:

- Median Sale Price: $161,381
- Forecast Median Sale Price: $187,150
- Two Year ROI: 16%
- Main Attraction: Two Golf Courses
  - Country Club of Maryland
  - Mount Pleasant Golf Course

Fourth Best Zip Code: 21239

Median Sale Price Baltimore, MD 21239

Idlewylde Neighborhood:

- Median Sale Price: $161,381
- Forecast Median Sale Price: $187,150
- Two Year ROI: 16%
- Main Attraction: Two Golf Courses
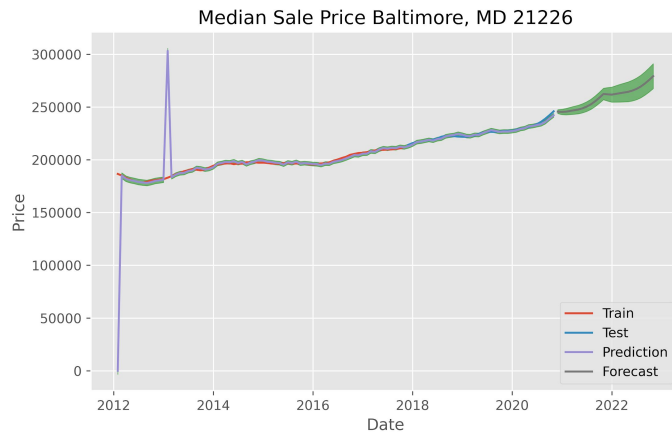 - Country Club of Maryland
  - Mount Pleasant Golf Course

Fifth Best Zip Code: 21226

Curtis Bay Neighborhood:

- Median Sale Price: $245,953
- Forecast Median Sale Price: $279,256
- Two Year ROI: 14%
- Main Attraction: Curtis Bay waterfront

Fifth Best Zip Code: 21226

Median Sale Price Baltimore, MD 21226

Curtis Bay Neighborhood:

- Median Sale Price: $245,953
- Forecast Median Sale Price: $279,256
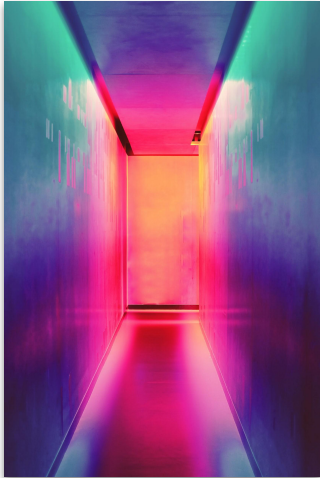- Two Year ROI: 14%
- Main Attraction: Curtis Bay waterfront

Summary of Recommendations

Zip Code	Median Price	Forecast Price	ROI
21213	$99,420	$129,461	30%
21229	$131,301	$157,004	20%
21216	$97,222	$115,747	19%
21239	$161,381	$187,150	16%
21226	$245,953	$279,256	14%

Future Work

Future Work

- Optimize and parallelize code for a nation-wide search.
- Try Long Short-Term Memory neural networks in place of SARIMA models.
- Incorporate exogenous variables.
  - School Districts
  - Proximity to Restaurants
- Model a more realistic investment strategy.
  - House flipping
  - Rental property investment
- Build project dashboard.

Thank You!

Ways to find me:

- Website: sethchart.com
- Twitter: @sethchart
- LinkedIn: sethchart
- GitHub: sethchart
- Email: seth.chart@protonmail.com
- Project Repository: Baltimore-Real-Estate-Investment

Appendix

List of Images

- [city buildings near body of water photo – Free Building Image on Unsplash](#) by ActionVance
- [road near brown house photo – Free Street Image on Unsplash](#) by Erin White
- [Samuel Augustus Mitchell](#), Public domain, via Wikimedia Commons
- [multicolored hallway photo – Free Neon Image on Unsplash](#) by Efe Kurnaz
- By Belairedison (talk) - self-made, Public Domain, [https://en.wikipedia.org/w/index.php?curid=16090003](#)
- [http://www.gwynnsfallstrail.org/](#)
- Benjamin, Jancewicz [https://goo.gl/maps/vMF6oUF8Qpq77rDv8](#)
- [https://belvederesquare.com/directory/atwaters/](#)
- [https://www.ccofmd.com/Golf/Golf%20Shop.aspx](#)
- By Preservation Maryland - Curtis Bay, rowhomes, CC BY-SA 2.0, [https://commons.wikimedia.org/w/index.php?curid=47624400](#)