

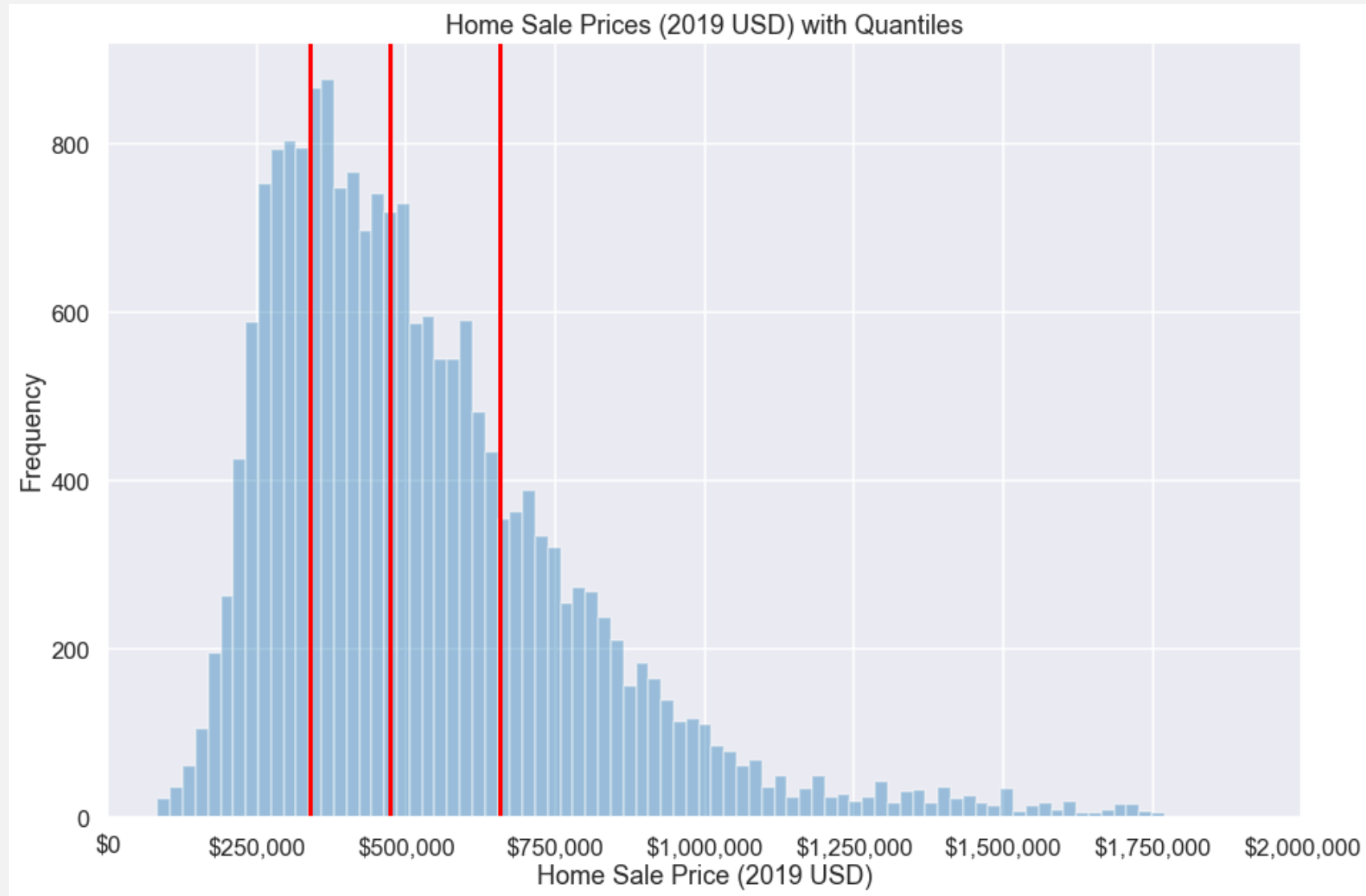


# RESIDENTIAL REAL ESTATE INVESTING

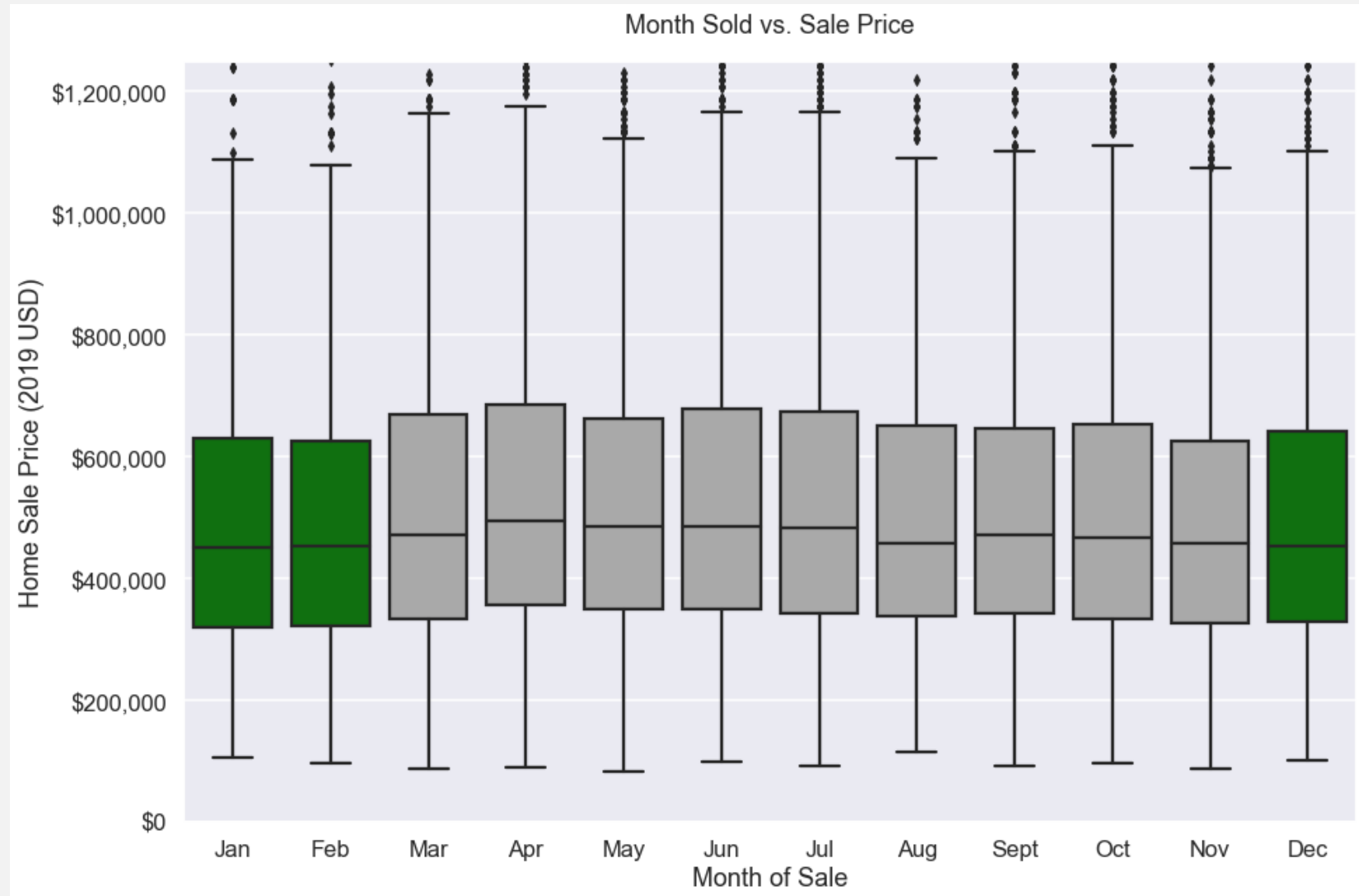
*Bargain Hunting in a Hot Market*



# HOME SALE PRICE DISTRIBUTION (2015-2016)



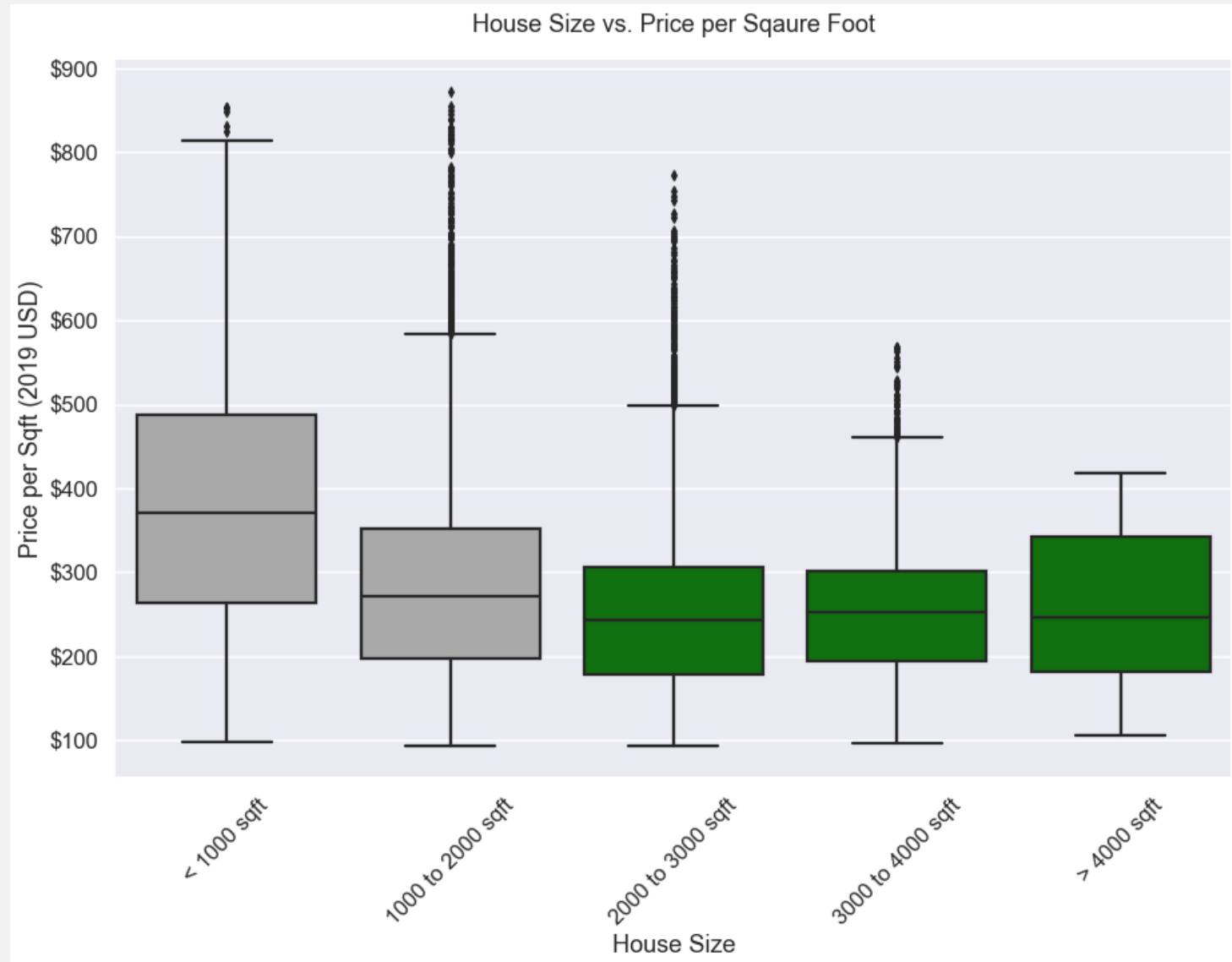
# BUY AT THE RIGHT TIME



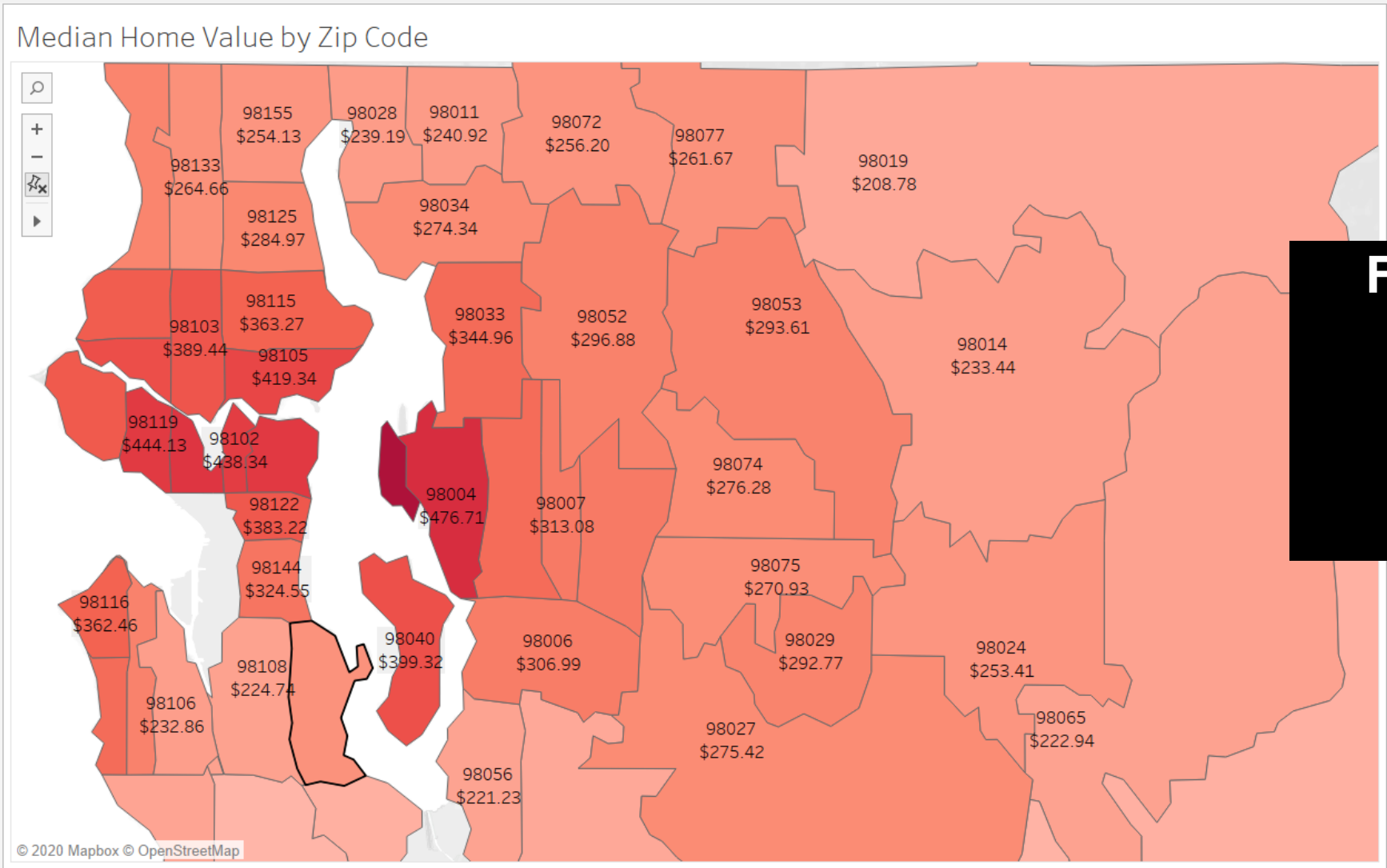
**Best / Worst Month to Buy**  
**January (\$452k median)**  
**April (\$496k median)**



# BUY THE RIGHT SIZE HOME



# SHOP THE RIGHT NEIGHBORHOODS



**Favorite Neighborhoods**  
**Kenmore, WA**  
**Renton, WA**  
**Snoqualmie, WA**



# SIMPLE LINEAR REGRESSION MODEL

## Top Six Features

- Waterfront
- Viewed
- Square foot age of living area
- Latitude
- Longitude
- Average income of zip code

## Coefficient Interpretation Utility

- Square footage of living area
- Increasing square footage by 10% increases home value by 5.4%
- Useful information for flip home financial model

## Model Prediction Accuracy

- Best model had RMSE of about \$127k – not great considering median home value of \$472k



# FUTURE WORK

## Consider School Districts

- Parents are willing to pay more on housing to send kids to top schools
- Engineer features describing public school quality for each zip code

## Future Business Hubs

- City of Seattle is becoming less business friendly with tax policies
- Companies such as Amazon and Microsoft are moving employees

## Analyze Longer Time Frame

- Geographical analyses over time to find low key areas showing early signs of future growth

## Advanced Regression Models

- Ensemble methods such as gradient boosting decision trees
- Push boundaries of overfitting data and use regularization
- Leave outliers and use robust regression





# THANK YOU

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