



# Renters' Lament

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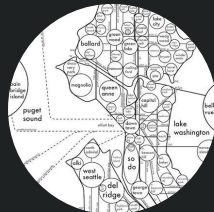
Rachel Squillace, Data Scientist

# Is rent too high?



# Approach

- Compiled data
- Compared rent and wages
- Created an interactive map



# Data



## Employment Security Department

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- Annual QCEW Reports for King County
- Assume representation of full time  
Seattle employee

# Data



Zillow

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- Monthly median rent by zip code
  - Missing data

# Data



## King County Property Sales

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- Residential/condo sales for 1-4 beds
- Assume rent trends mimic sale trends

# Affordable Rent

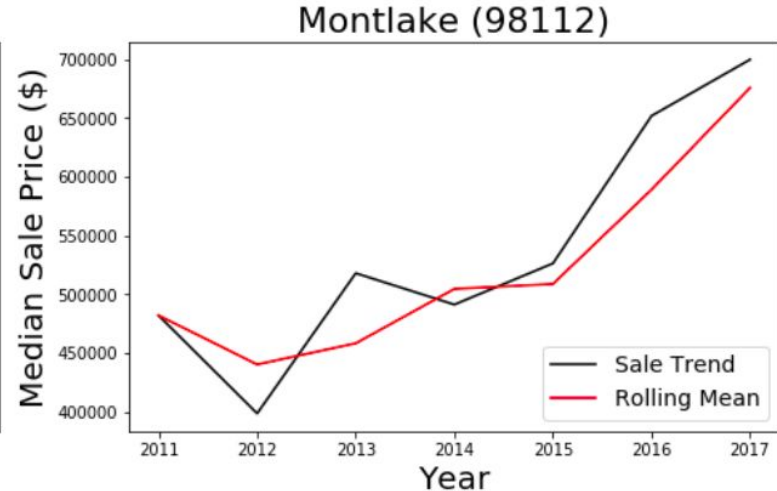
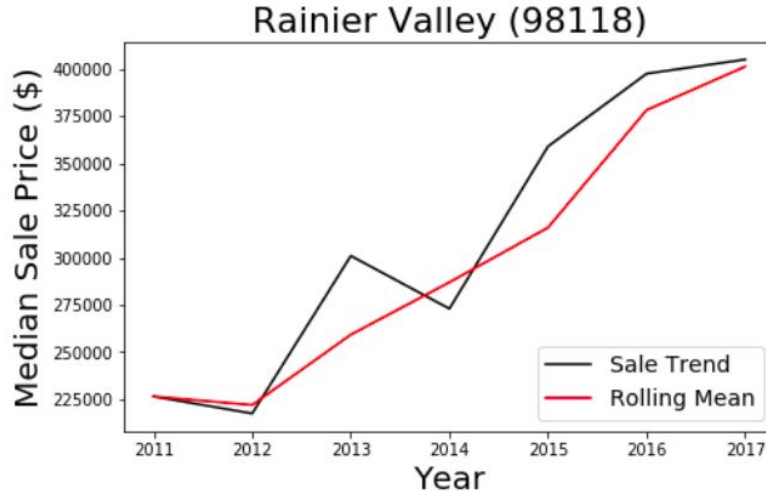


Monthly income  $> 3x$  rent

# Data Extrapolation

## Smoothed :: Normalized :: Interpolated

Volatile Sale Trends

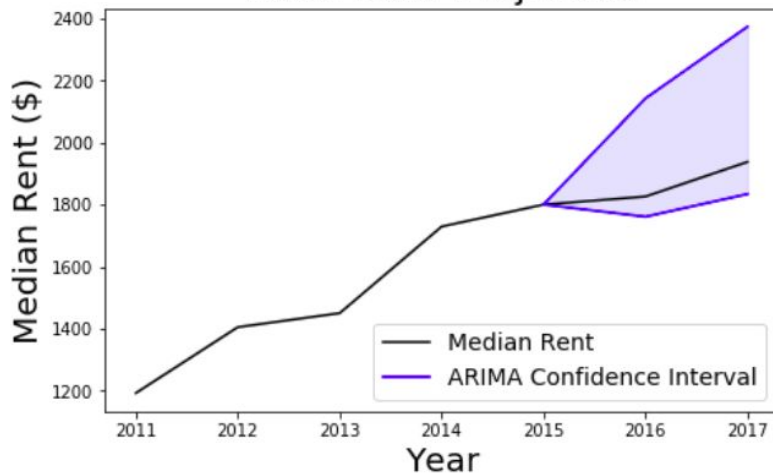




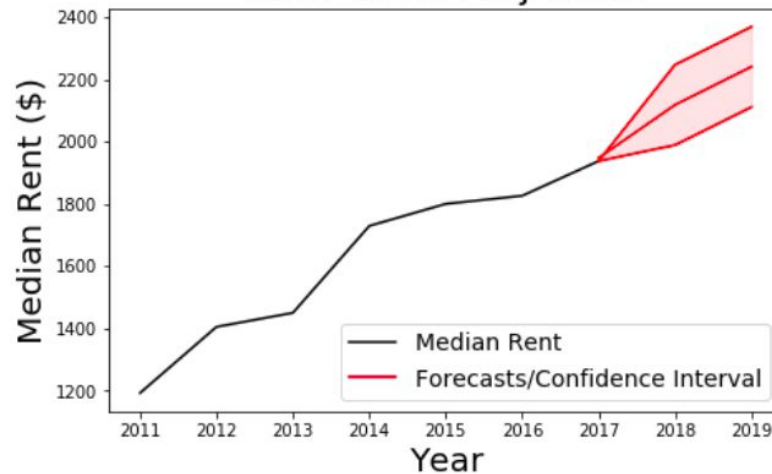
# ARIMA Forecasts

## Central District (98122) ARIMA Forecasts

### 2015-2017 Projection



### 2017-2019 Projection



# Visualization

- Built with Brython!
- Try it yourself at:

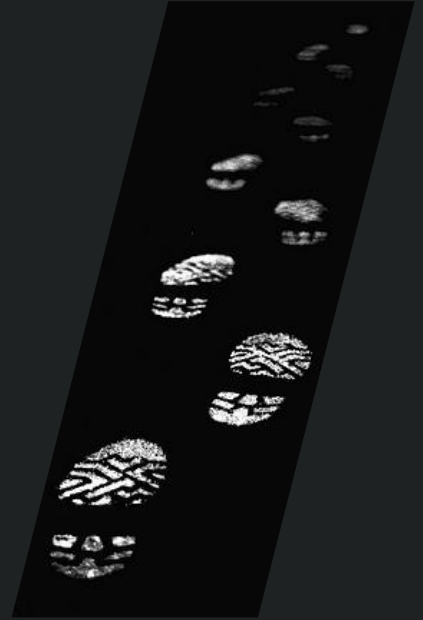


renterslament.online



# Next Steps

- Use incremental data for seasonal ARIMA forecasts
- Display affordability gradient
- Aesthetically enhance website



# Rachel Squillace



rsquillace



rsquillace



rmsquillace@gmail.com



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Thank you for your time!

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