

CRAIGSLIST HOUSING

North and South Bay Rentals



CRAIGSLIST HOUSING

- » Rental marketplace for variety of needs
- » Focus on **apts/housing** category
- » What should you price your housing unit?

housing

apts / housing

housing swap

housing wanted

office / commercial

parking / storage

real estate for sale

rooms / shared

rooms wanted

sublets / temporary

vacation rentals

APPROACH

- » Use **BeautifulSoup** and **requests** library to scrape data from Craigslist
- » Process and prepare data
- » Perform linear regression using **sklearn**

THE DATA

★ **\$3546 / 1br - 1002ft² - LAST 1br 1.5 Bath Apartment on the Market! Dont Miss Out. Call Now!**


(sunnyvale) 

image 1 of 6

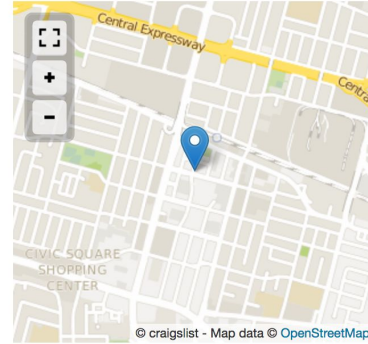


Solstice Apartment Homes

www.LiveSolstice.com

[show contact info](#)

299 W Washington Ave. Sunnyvale, CA 94086



© craigslist - Map data © OpenStreetMap

299 W Washington Ave.

[\(google map\)](#)

1BR / 1Ba **1002ft²** **available now**

cats are OK - purrr

dogs are OK - woof

apartment

w/d in unit

no smoking

attached garage

wheelchair accessible

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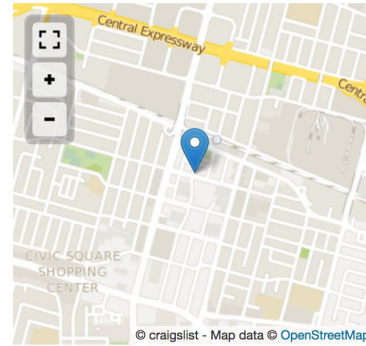


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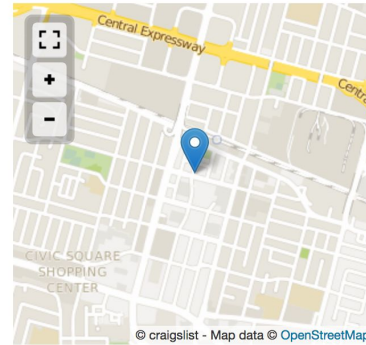
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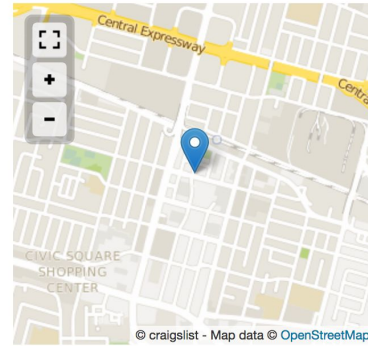
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THE FEATURES

- » **Bedrooms** (num)
- » **Bathrooms** (num)
- » **SqFt** (num)
- » **Type** (categorical)
 - » Apt., House, etc.
- » **Cats allowed** (bool)
- » **Dogs allowed** (bool)

- » **Furnished** (bool)
- » **No Smoking** (bool)
- » **Wheelchair Accessible** (bool)
- » **Images in Post** (num)
- » **Words in Post** (num)
- » **Region** (bool)
 - » 0 - South Bay
 - » 1 - North Bay

THE FEATURES

- » **Laundry** (categorical)
 - » No laundry (1)
 - » Laundry on-site (2)
 - » w/d hookup (3)
 - » Laundry in building (4)
 - » w/d in unit (5)

- » **Parking** (categorical)
 - » No Parking (1)
 - » Off-Street Parking (2)
 - » Street Parking (3)
 - » Carport (4)
 - » Detached Garage (5)
 - » Attached Garage (6)

FEATURE SELECTION

22 columns total!

Bedrooms	No Smoking
Bathrooms	Wheelchair Accessible
Sqft	Images in Post
Type (8 cols)	Words in Post
Cats	Parking Availability
Dogs	Laundry Availability
Furnished	Region

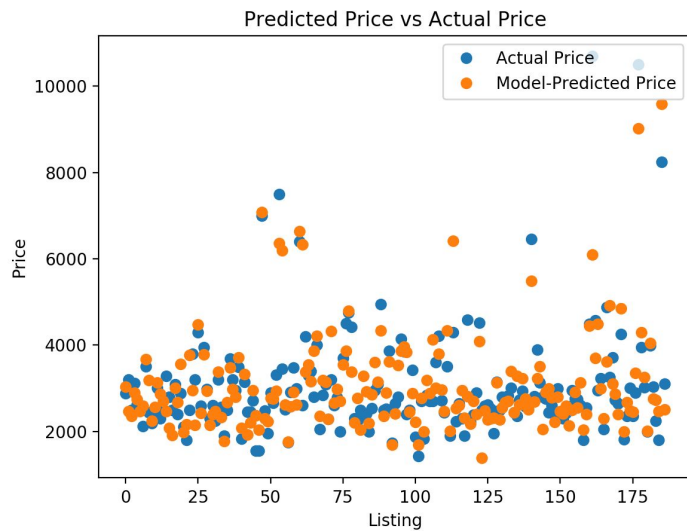
FEATURE SELECTION

Applied **Lasso** to simplify factors in model

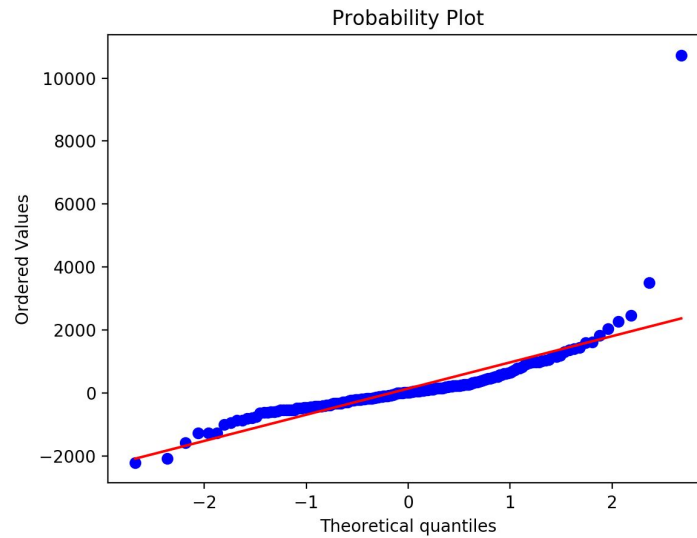
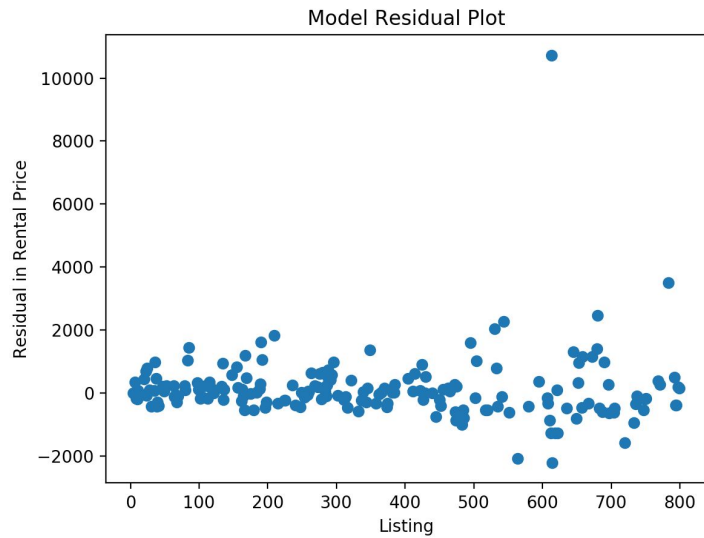
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Sqft	Images in Post
Type (8 cols)	Words in Post
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Dogs	Laundry Availability
Furnished	Region

RESULTS

RESULTS



RESULTS



OUTLIERS

☆ **\$19500 / 4br - 4323ft² - 4 Bedrooms Plus Bonus Room, 3 Full & 2.5 Bath Southern Mansion in Napa**
(napa county) 🗑️

☆ **\$14000 / 5br - 4000ft² - AMAZING VIEWS! Sophisticated and Private Mill Valley Hilltop Oasis!**
(mill valley) 🗑️

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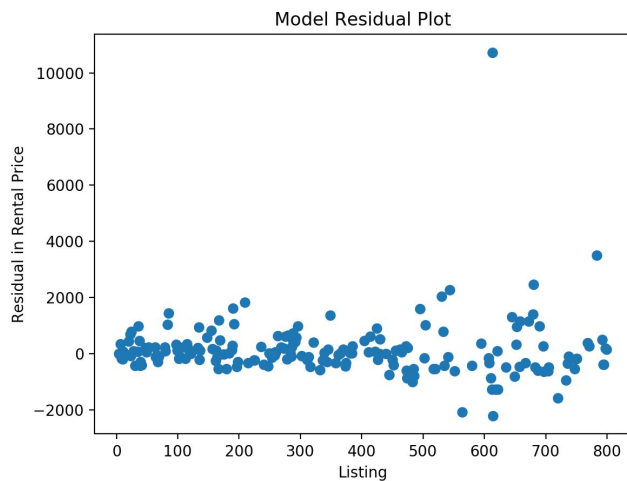
☆ \$14000 / 5br - 4000ft² - AMAZING VIEWS! Sophisticated and Private Mill Valley Hilltop Oasis!
(mill valley) 🗑️

title	hood	price	bed	bath	sqft	type
LEX Has Everything You Need, Join Us Today--Open House This Weekend!	(san jose south)	29903165	2	2		apartment

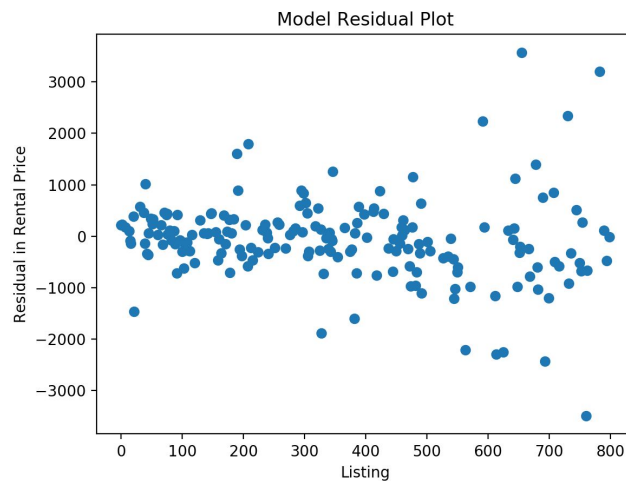
Average Price with LEX: 40061

Average Price without LEX: 2918

“PLAY IT AGAIN, SAM”

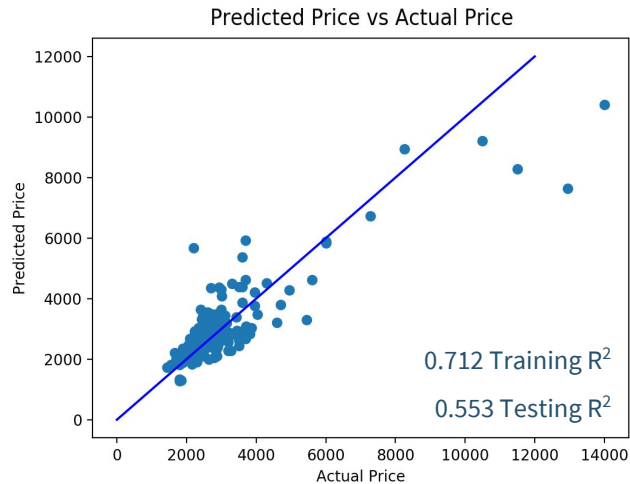


Before



After

“PLAY IT AGAIN, SAM”



Before



After

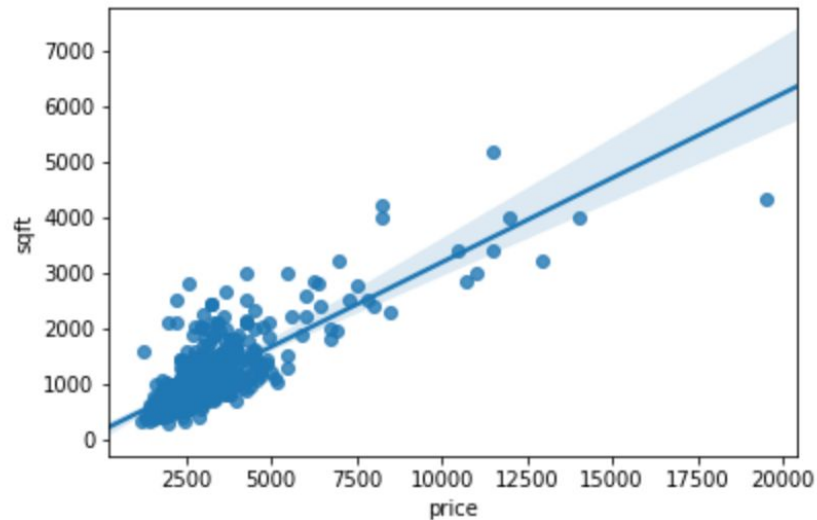
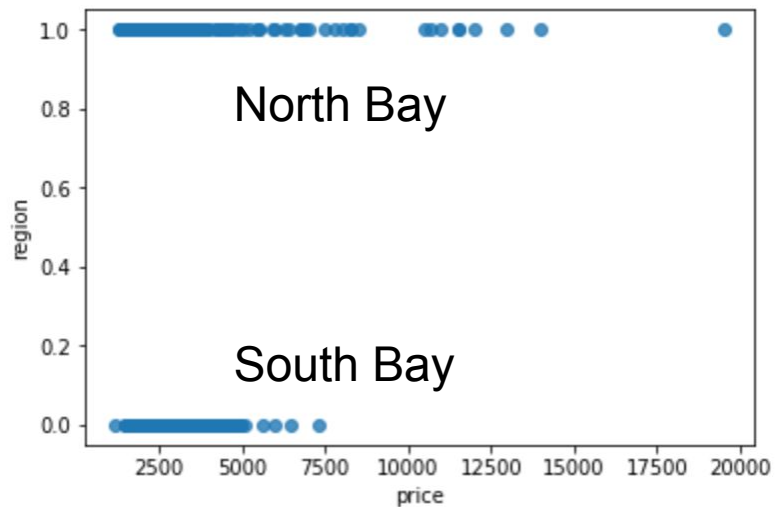
FUTURE EXTENSIONS

- » Greater geographic granularity; neighborhoods
 - » Additional geographic locations
- » Were units actually rented?

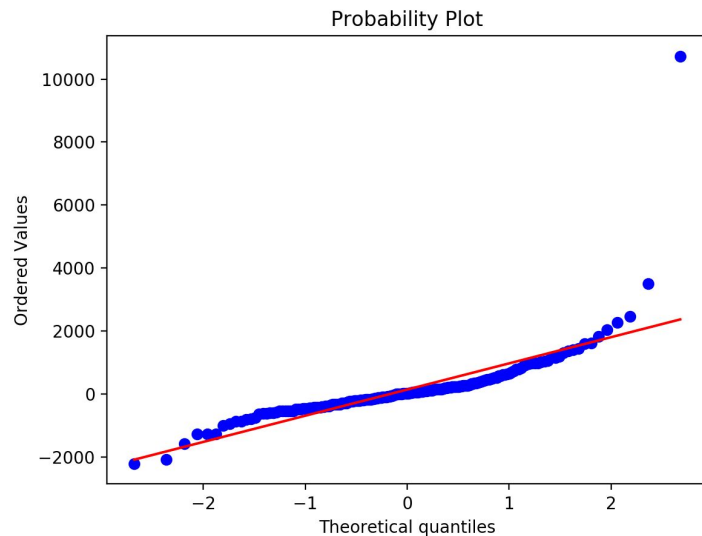
APPENDIX

Supporting Slides

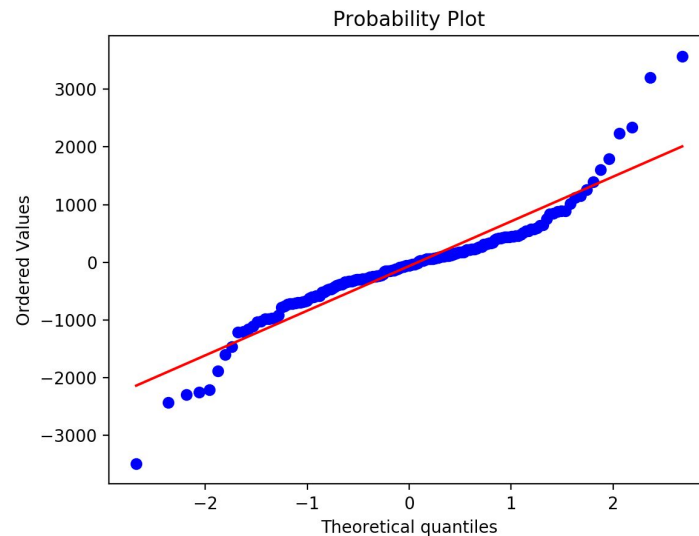
LASSO-SELECTED FEATURES



“PLAY IT AGAIN, SAM”



Before



After

REGRESSION COEFFICIENTS

(-253.984, 'bed')

(2.455, 'sqft')

(177.945, 'dogs')

(974.015, 'furnished')

(0.243, 'words')

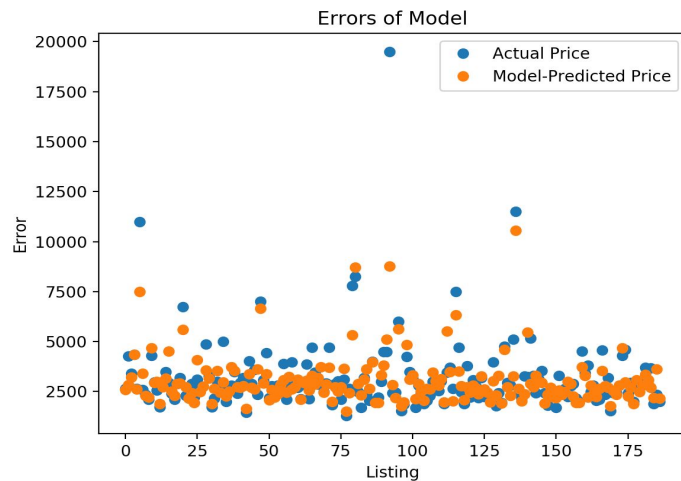
(20.596, 'laundry')

(-252.628, 'region')

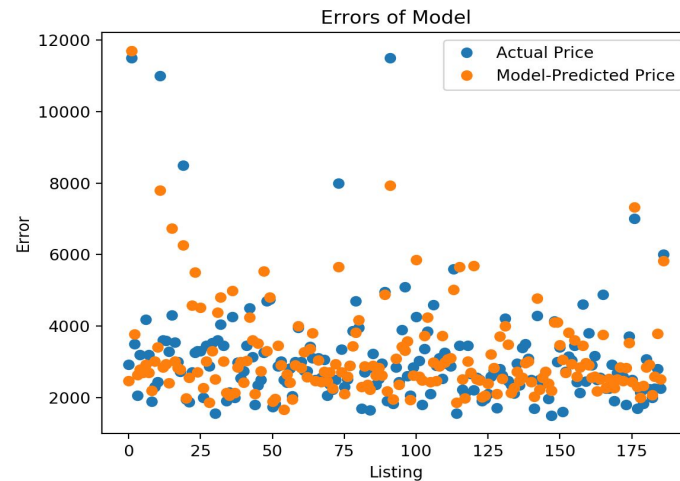
(-172.700, 'type.house')

(-124.118, 'type.townhouse')

PREDICTED VS ACTUAL



Before



After