



Why is Rent so High? (West Coast Edition)

By: John Lassetter
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Question

How much will an apartment rent for based on its description?




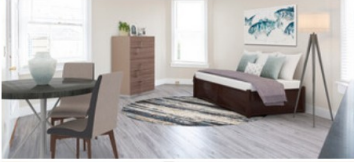

Ex. features:

- Location
- Square Footage
- Number of bedrooms/bathrooms

Data

- Address
- Monthly rent
- #Bedrooms/Baths
- Sq. Feet
- Build Date
- Nearby Colleges
- Nearby Airports
- More: pets allowed, Amenities

Map Menu Apartments.com Sign Up / Sign In



Home / California / San Francisco / 2148 Broderick

2148 Broderick

2148 Broderick St, San Francisco, CA 94115
[Pacific Heights](#)
★★★★☆ (0 reviews) ✓ Verified Listing

RENTSFNOW.

Monthly Rent	Bedrooms	Bathrooms	Square Feet
\$1,995	Studio bd	1 ba	204 sq ft

Property Information

- Built in 1895
- 17 units/4 stories

Colleges

	Drive	Distance
University of California, San Francisco	3 min	0.6 mi
University of San Francisco	5 min	1.4 mi
Academy of Art University	7 min	2.5 mi

Airports

	Drive	Distance
San Francisco International SFO	27 min	15.5 mi
Oakland International OAK	35 min	21.8 mi

Similar Rentals Nearby

2030 Vallejo Street Apa...

2030 Vallejo St, San Francisco, CA 94123

BLVD

New
\$4,600 - 9,880
1-2 Bed
Avail. Now
Dog Friendly, Cat Friendly,
Dishwasher
(855) 614-4138
Email

57 Photos Virtual Tour Videos

Data - Multiple Listings per Page

Luma

1440 Columbia St, San Diego, CA 92101

Little Italy

★★★★★ (0 reviews) ▾

✓ Verified Listing



Monthly Rent

\$2,643 - \$14,754

Bedrooms

Studio - 3 bd

Bathrooms

1 - 3 ba

Square Feet

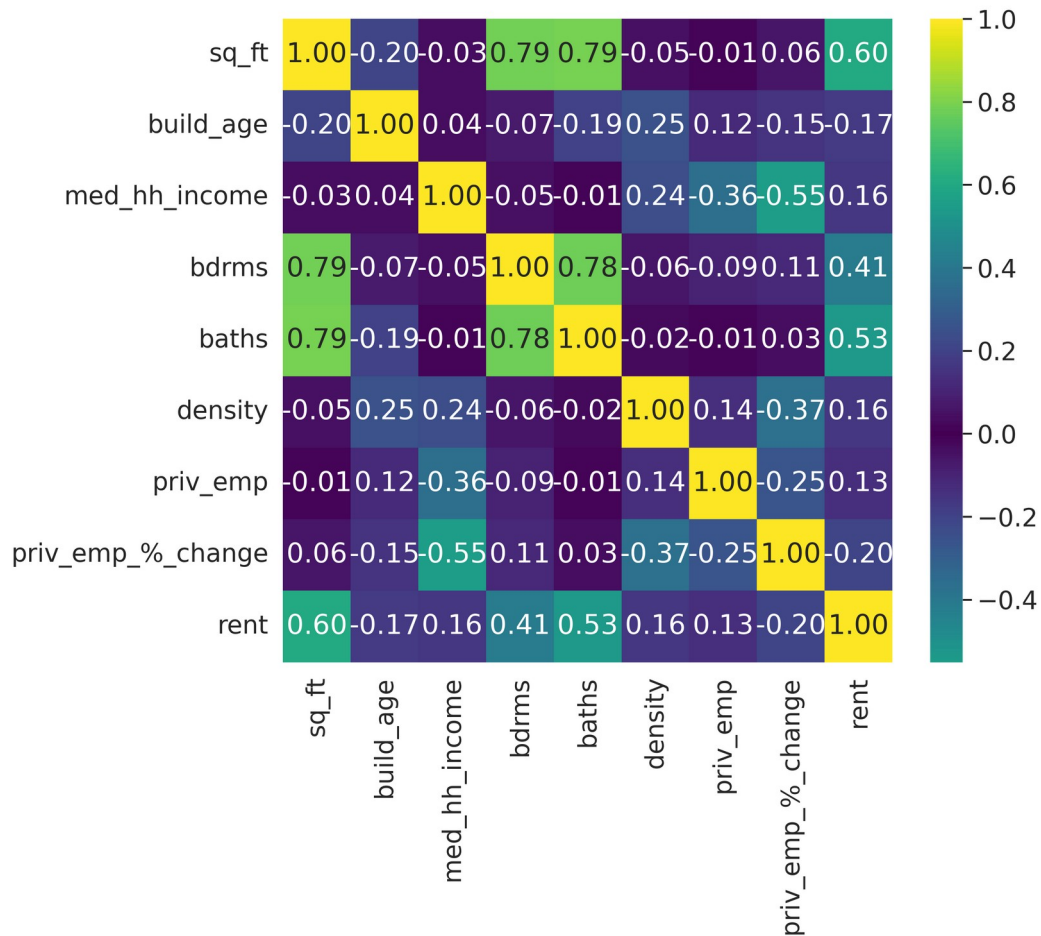
546 - 2,648 sq ft

Assumption: Lowest/highest rent corresponds to combination of all lowest/highest values

Consequences:

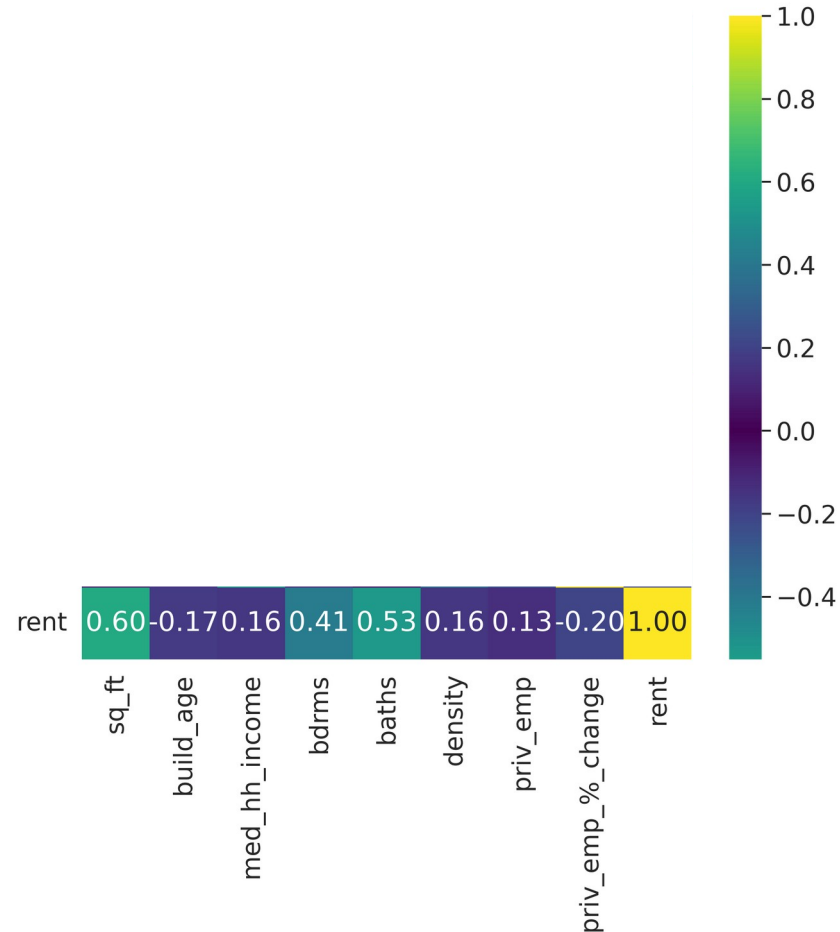
- Apt complexes with more than 2 listings are under-represented
- Middling apt's are under-represented

EDA



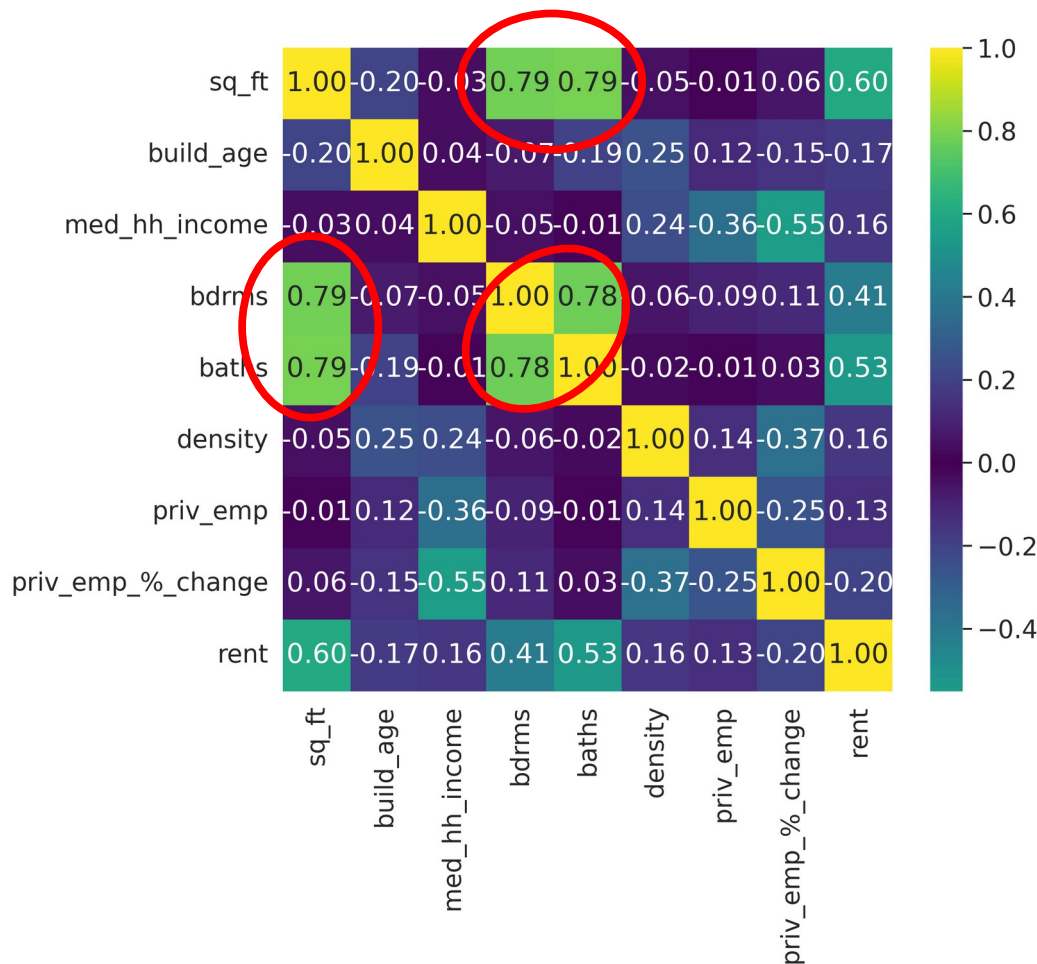
EDA

- Sq. ft. and # of baths have highest correlation
- % change in employment has negative correlation with rent



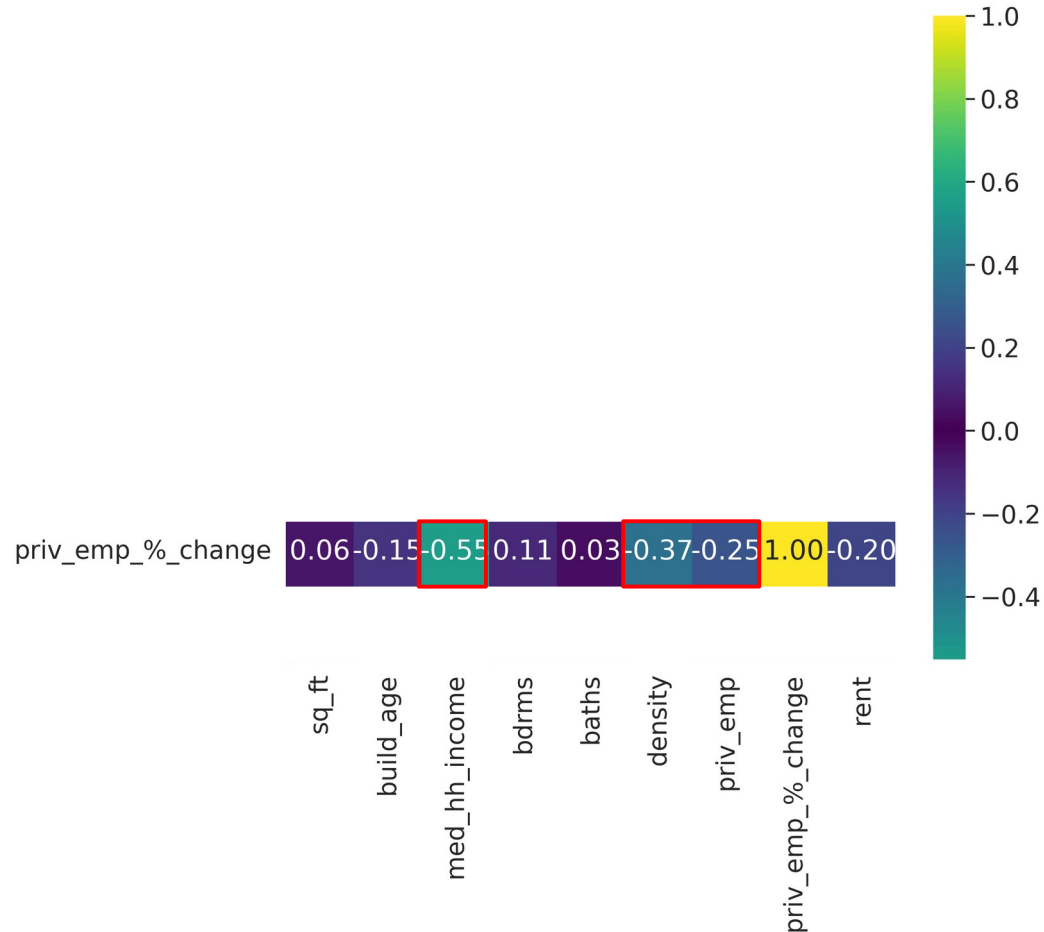
EDA

- Sq. ft., # baths, and # bdrms all highly correlated
- Demographic features are all correlated with each other



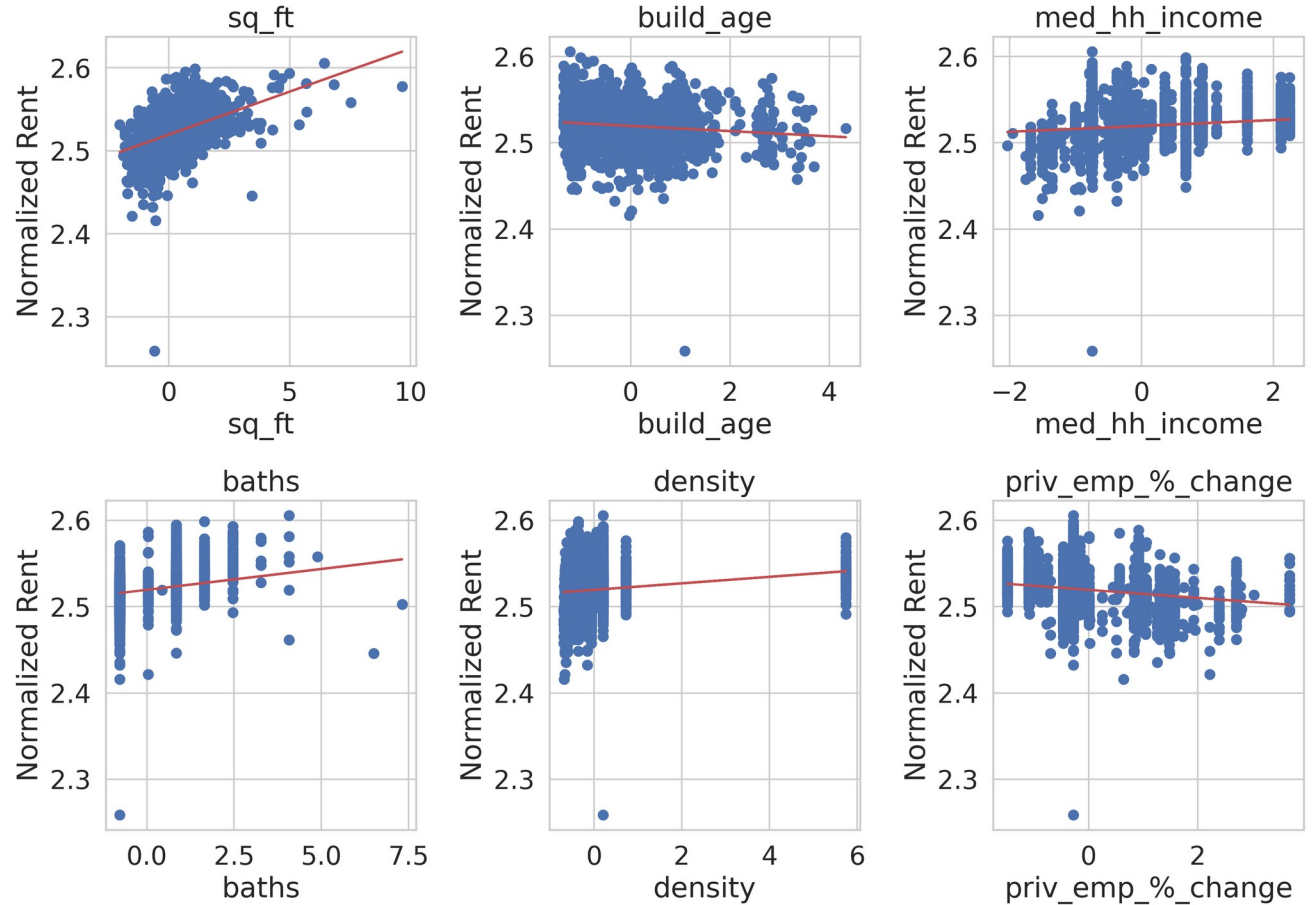
EDA

- Sq. ft., # baths, and # bdrms all highly correlated
- Demographic features are all correlated with each other



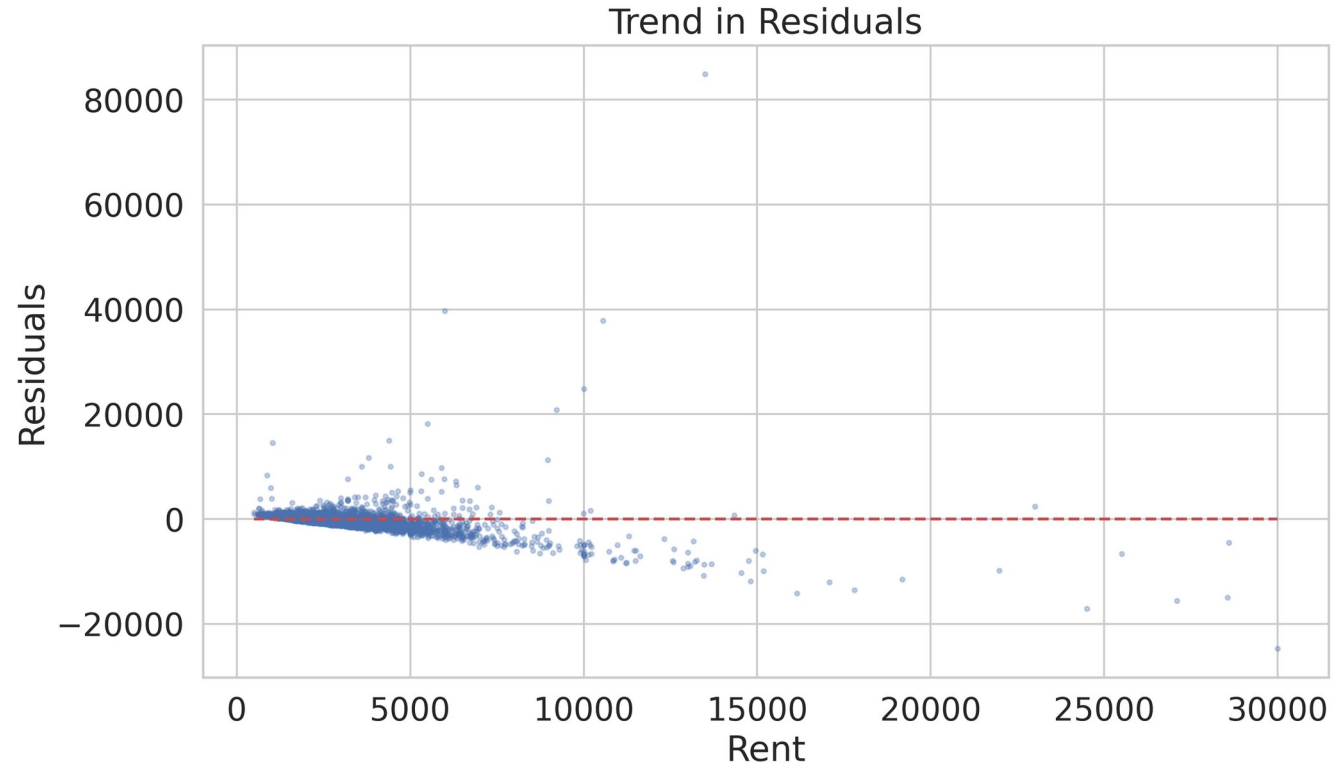
Results

- Model: LASSO
- MAE: \$772/mo
- Median Rent: \$2,295/mo
- $R^2=0.44$



Results

- Room for improvement
- Model underestimates expensive apartments

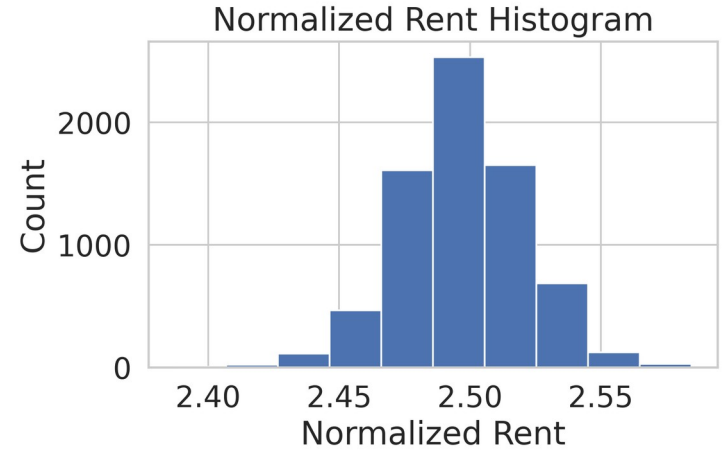
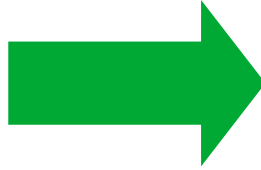
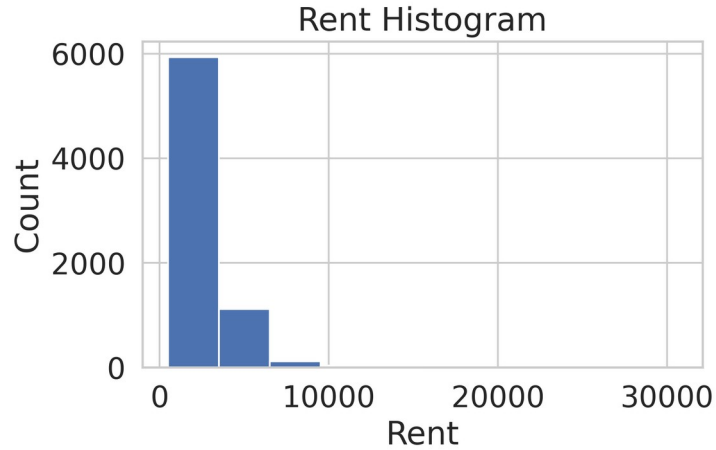


Possible Improvements

- Add additional features (such as distance to ocean/city center)
- Try nonlinear regressors like a random forest
- Scrape more data (especially from outside LA county)

Questions?

Appendix



$$y_{box-cox} = \frac{y^\lambda - 1}{\lambda}$$

Appendix

Rent vs features scatterplots

