

Homelessness Factors

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Problem

- Our goal is to determine how housing market factors and homelessness rates interact with each other.

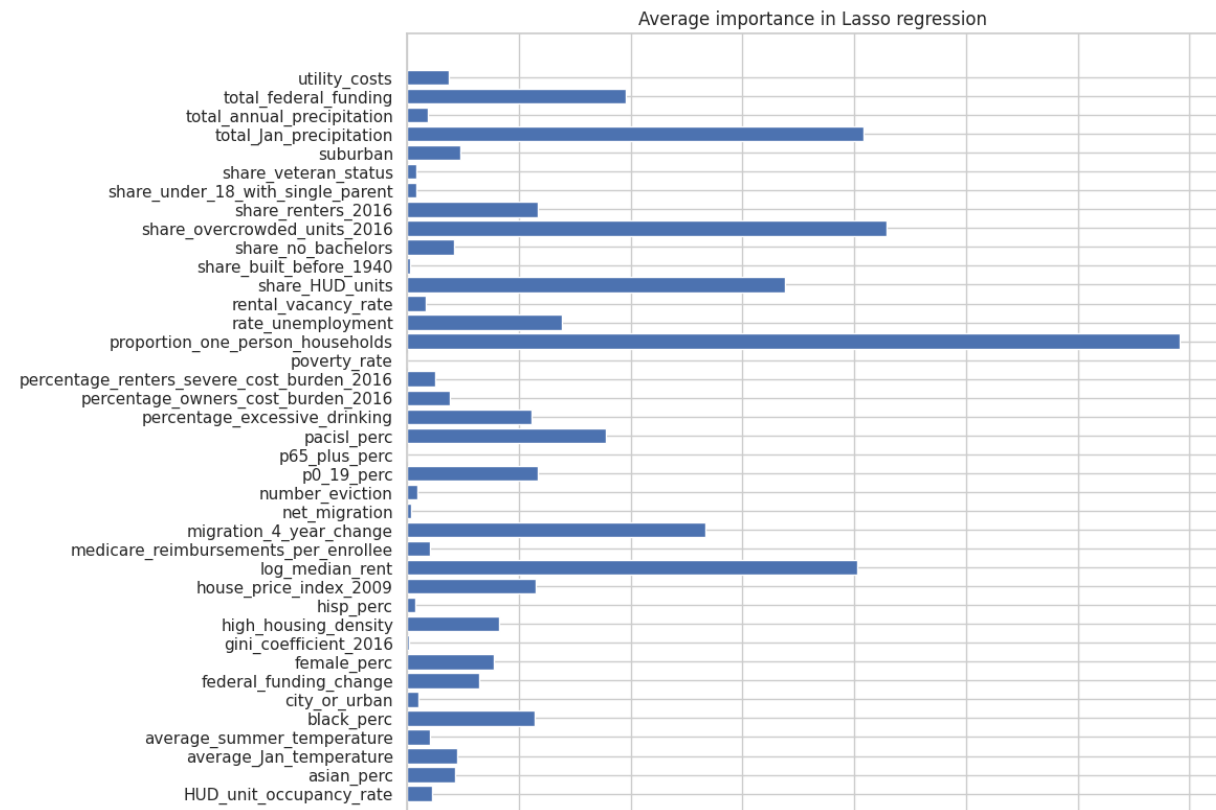
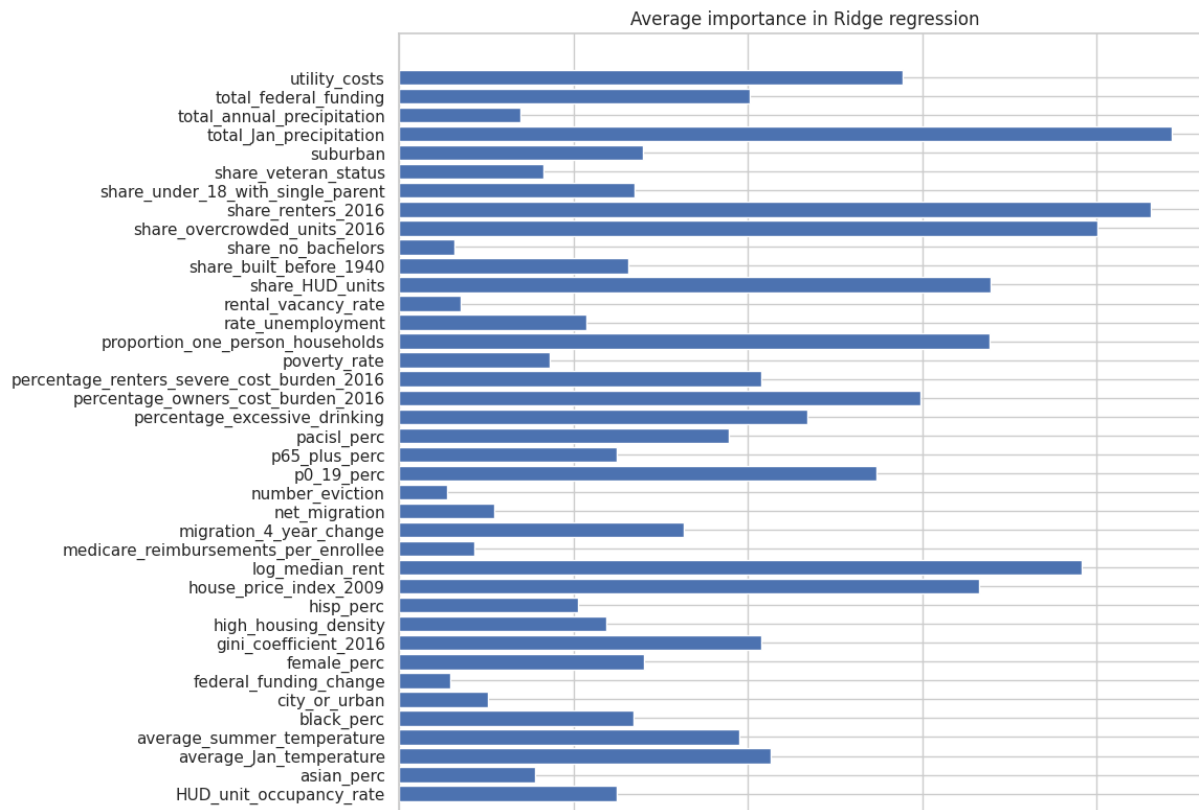
Data

- Data was gathered from the HUD report from 2019 about homelessness
- Data was cleaned and filtered to remove missing values
- Certain values changed to rates rather than values for consistency

Analysis

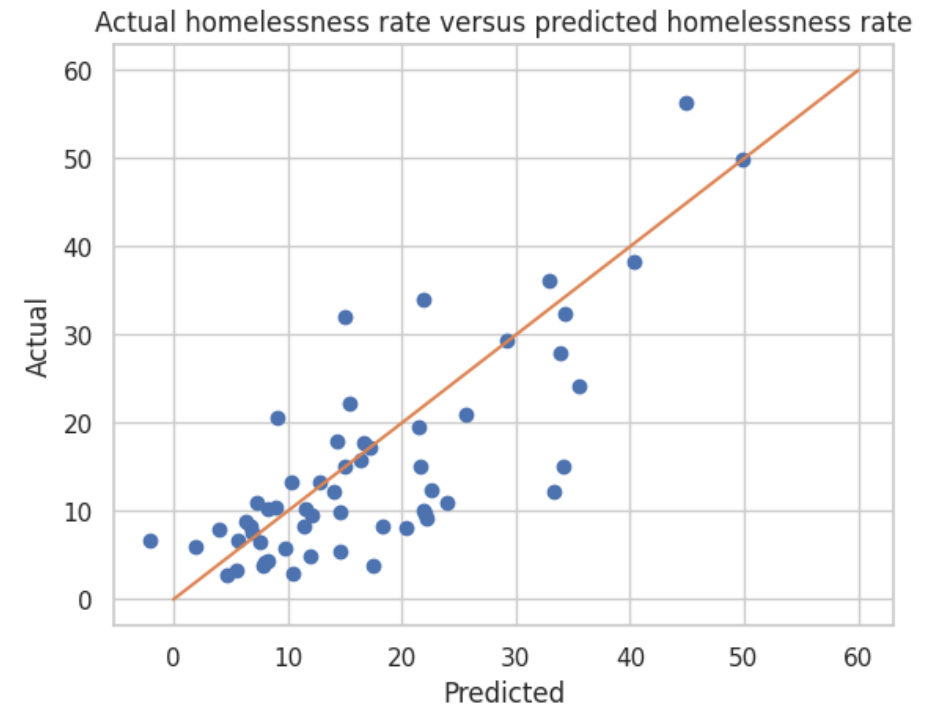
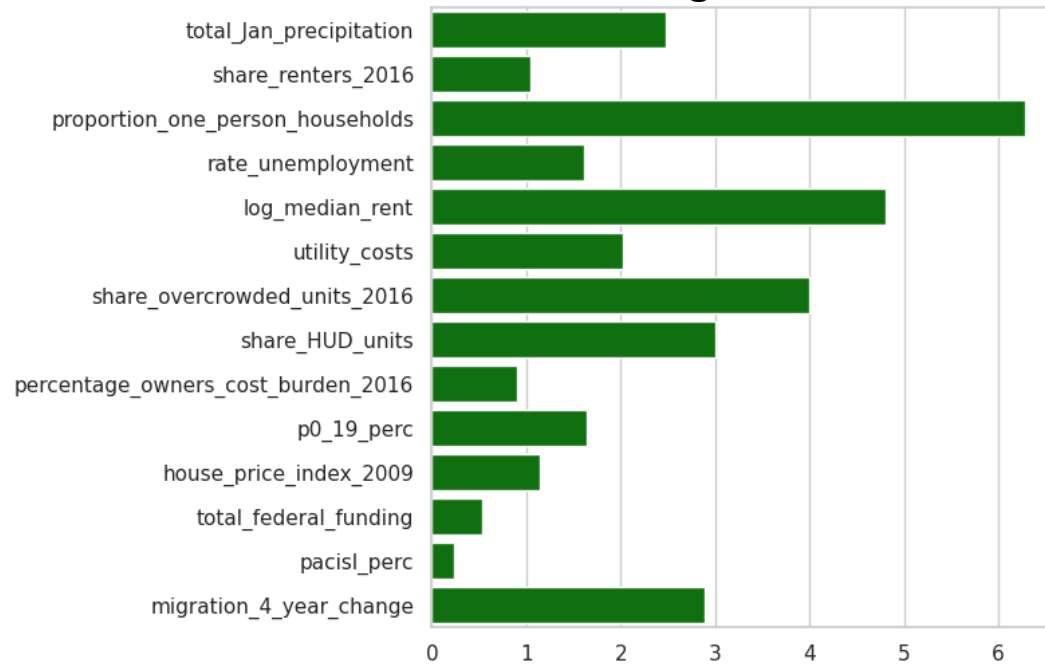
- Scaling and regularization were done to compare the factors
- Used both Lasso/Ridge regularization as well as XGBoost regularization to determine most important factors
 - Did a K-fold validation and took the average importances to determine true importance of each factor

We get specific factors as important in Ridge/Lasso regression

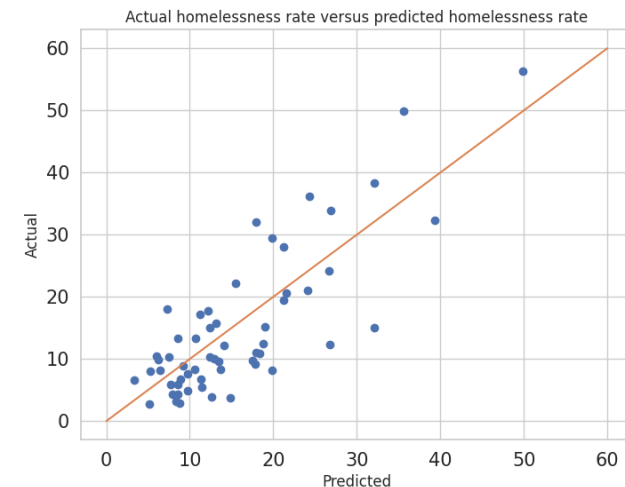
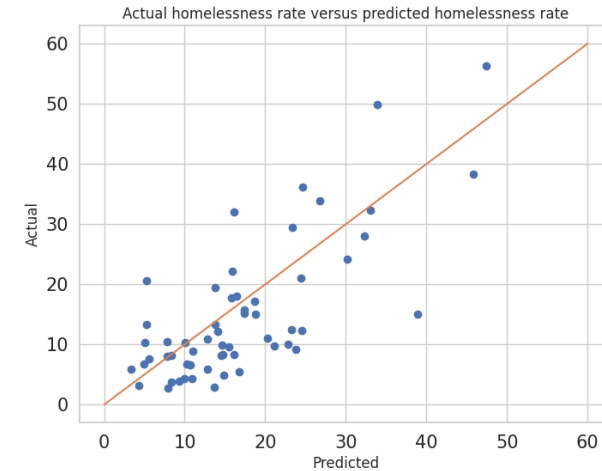
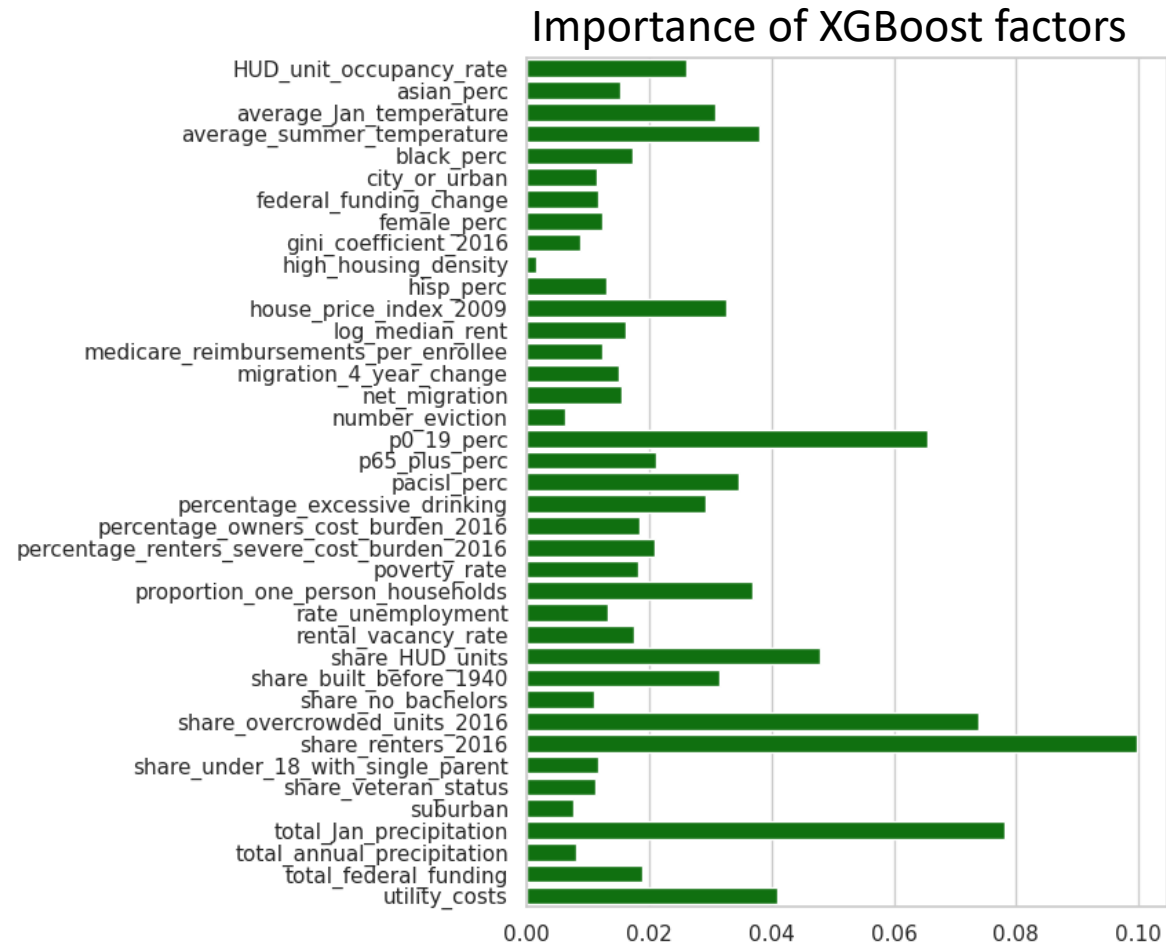


Using those factors gives a reasonable model

Coefficients for Ridge/Lasso
Regression



Using XGBoost gives a comparable model with different important factors



Conclusion

- Both socioeconomic and environmental factors are useful in predicting homelessness rates in cities
- Funding doesn't seem to have as much of an impact as some of the other factors, but does have a reasonable amount