

In this homework, I learned how to apply a multiple linear regression model to predict house prices using features like the number of bedrooms and living space. By completing Lab 3 and using real data, I was able to train a model, evaluate its performance using metrics such as  $R^2$ , MAE, and MSE, and interpret how each feature affects the predicted price. One of the most interesting findings was that increasing the living area significantly increased the predicted price, while adding more bedrooms slightly decreased it, showing how features may have different effects. I also practiced how to prepare data, scale features, and compare predicted vs actual values. This homework helped me understand not just the coding steps, but also the logic behind model interpretation.

Overall, this homework helped me understand how multiple linear regression works in practice. I learned how to prepare real data (drop missing values), train a model, evaluate its accuracy, and interpret the effect of each feature on the prediction.