

Model Details

- **Model Name:** Chicago AirBnB Price Prediction Model for CS 25910
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- **Model Date:** 5/4/2022
- **Model Type:** Simple Linear Regression ML Model
- **Input:** Neighborhood, Latitude, Longitude, Room Type, Availability
- **Output:** Predicted Price

Intended Use

- **Primary Intended Uses:** To predict price of AirBnB rentals given the parameters
- **Primary Intended Users:** Anyone intending to predict AirBnb rental price

Performance

- **Root Mean Square Error (RMSE):** Averaging around 100
- **Overall Trend:** The model seems to overestimate the actual price

Data

- **Data Pool:** Chicago Airbnb Open Data from <https://www.kaggle.com/datasets/jinbonnie/chicago-airbnb-open-data>
- **Training Data:** 80% of randomly selected data from above
- **Evaluation Data:** 20% of the remaining data

Preprocess

- **Outliers:** Outliers of price below 20 and above 1000 were removed
- **Category Selection:** Among many categories, only Neighborhood, Latitude, Longitude, Room Type, Availability were used
- **Dummy Variable:** Dummy variables of neighborhood and room type were used

Limitation

- **Inaccuracy:** Current model has high RMSE, with some price predictions of negative price
- **Outliers:** The model removed outliers with high and low prices, and thus the model may be inaccurate for high or low price