We would like to forecast dollar rental prices for AirBnb listings for certain days of the week (M, T, W, Th, F, S, Su) and holiday seasons with predictors including but not limited to date, city, accommodations, etc. We hope to train and test our model with the NYC AirBnB data provided by data.BetaNYC that contains listings information for January 2015 and May 2015. We hope to expand on the price modeling work accomplished by Tang and Sangani in “Neighborhood and Price Prediction for San Francisco Airbnb Listings” by approaching the problem from a regression (continuous price forecasting) framework instead of a classification (above/below a threshold price) framework. We believe that while a binary classification framework can be helpful to efficiently price homes throughout the year, the ability to accurately set efficient prices for listings could increase space utilization and thus total revenues of AirBnB and its hosts.

If possible, we would like to find more data around different holiday seasons. The data we have limits us to January and March of 2015 (allowing us to only analyze prices during the last part of the New Year’s season) – perhaps making it difficult to estimate the average/individual premium(s) that rentals command during the holiday season vs. non-holiday season.