

## **Predicting Airbnb Listing Price | Project Proposal**

Claire Miles

### **The Problem:**

Today's world is more connected than ever. With increasingly long nonstop flights, spontaneous translation apps, and social media friendships spawning worldwide, it's easier than ever to be a global citizen. One company catalyzing connections is Airbnb, which provides a service that allows property owners to rent their houses, apartments, or rooms in their hometowns, offering tourists a unique way to lodge in a new city - one that is arguably more authentic than lounging at a luxury resort.

By creating these home-away-from-homes, Airbnb has skyrocketed in popularity for those looking to live like locals and be more culturally connected to their destination. It's in Airbnb's best interest for its listings to be the best they can be, not only to create an optimal user experience, but also to maximize the prices of their listings. Therefore, it's very useful to know what goes into a successful listing, and to be able to predict the price of a listing from its attributes. This will help Airbnb increase its revenue and help hosts optimize the value of their listings by predicting their success.

### **The Inquiry:**

How can we predict an Airbnb listing's price based on other information about that listing?

### **The Client:**

Our client is Airbnb. Airbnb will be able to use this data-driven product to encourage its hosts to increase the quality of their listings and increase its overall revenue.

### **The Data:**

I will be using data from Inside Airbnb (<http://insideairbnb.com/get-the-data.html>), an independent, non-commercial project that collects public data from the travel and accommodations company Airbnb. Data is collected monthly from major cities and metropolitan regions around the world, and includes information about that city's listings, reviews, and calendar data. I will be focusing on data about Airbnb listings and the reviews for those listings.

### **The Method:**

1. Collect user review data and listing data from the website listed in the previous section of this report. Clean and preprocess the data.
2. Use sentiment analysis on reviews data to derive a reviews score to add as a feature for each listing.
3. Use machine learning to create an algorithm that predicts the price of an Airbnb listing.
4. Create an interface that can take a URL of an Airbnb listing and predict the price.

**The Deliverables:**

This project will definitely include the code on Github, a report outlining the business case, the methods, and the results, as well as a slide deck for presentations. I would also like to explore creative visualizations or user interface for this project that could add to the reader's overall understanding.