**Title:** Predicting Airbnb prices based on a number of variables and how these prices have affected occupancy rate in the long term.

**Problem:** Since its founding in 2008, Airbnb has been increasing and gwoing dramatically and has served more than 150 million guests through over 3 million listings in more than 190 countries in less than a decade. The main contributor for Airbnb’s success is through low costs and direct interaction with the local community that provides guests with unique stay experiences.

Price is often the key factors that impacts the clients’ select of lodgings and as part of the capstone project, I’m proposing to investigate factors that impact the Airbnb prices. Factors to be included in this analysis are location, star rating, number of rooms, amenities, key phrases in the Airbnb listing, reviews left by previous guests and occupancy rate. We all know that Airbnb prices are being determined by the owner themselves, but with little knowledge of how much value their properties are, how can they determine if the prices are the true and accurate reflection of the market.

Additionally, Airbnb owners will also be able to know if it’s profitable to renting using Airbnb or the alternative and more traditional method of long term rentals using real estate agents

**Who might care?:** Owners of the property listed in Airbnb. They would want to know how is their rental property faring in the Airbnb space vs the long term rental property market.

**Data:** The dataset contains Airbnb rental properties listing from 2016 to 2018, with variables such as their unique identifier number, description summary, location, property type, number of rooms, user reviews and prices.

<http://insideairbnb.com/get-the-data.html>

The second dataset from kaggle contains the Melbourne housing market prices. From here, we are able to gauge the rental prices (6% of the purchase prices) of similar properties. This dataset contains number of rooms, suburbs, type and purchased prices.

<https://www.kaggle.com/anthonypino/melbourne-housing-market>

**Modelling approach:** Without going into much detail of the modelling approach as I’m still in the process of learning them. One of them that comes into mind is

* Supervised learning to determine which will reveal which category of increase Airbnb prices and also affecting occupancy rates
* Naive bayes method to uncover user reviews and summary description on what they truly want from a rental property, and how this affects Airbnb prices

**Possible limitations:**