* **Content:** Airbnb is an San Francisco-based company operating an online marketplace for short-term homestays and experiences. The company acts as a broker, provides the website, and charges a commission from each booking. Airbnb’s goal is to use historical data, from April 2022 to March 2023, including listings, neighborhood, calendar, reviews to recommend the listing price and listing price adjustment based on the market demand. The final decision makers are the CIO (Airbnb’s Chief Information Officer), and the CMO (Airbnb’s Chief Marketing Officer).
* **Need:** At the present, Airbnb hosts will manually adjust the listing price based on their own judgement. By learning the market demand and supply, Airbnb will be able to suggest the listing price and the suggest to update a new listing price when needed. From there, the Airbnb hosts will not underprice or overprice their short-term rental properties.
* **Vision:** All Airbnb hosts will use two features embedded on the production website of Airbnb. The first feature named “Suggested Listing Price” is located next to the “Listing price” box. The second feature is to send an email to the host to suggest the adjustment of the listing price when their listing price is too high or too low.
  + *Mockup:* The final model will predict the market price based on the influence of certain criteria given the last [date range] (for example: the last 4 quarters).
  + *Argument sketch:* “Based on the last 4 quarters of historical listings, the listing price of a 1 bed 1 bath property in your area is 10% higher in the month of March and April. Hence, to increase yours and maximize your profits, you are suggested adjusting your listing price from $150 per night to $160 - $170$ per night.”
* **Outcome:** First, the CIO and the CMO will be able to test and view two features embedded on the testing website of Airbnb under the Washington DC region only. The testing period will be 6 months before the new model is put into production but only in the Washington DC region. During the testing time, the CIO, the CMO and the data team will monitor closely the performance of the new model. The evaluation of this new algorithm on production will be conducted after each quarter for the first 2 years. If the result comes out well, the new model will be applied to all other regions. From there, the evaluation will be examined every 2 quarters. Periodic updates to the system will be needed but its frequency will be dependent on the results and as bugs are reported.