An Accommodation Rental Platform

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We plan to create a centralized rental system for temporary accommodations, that would help facilitate different transactions between customers and hosts. Airbnb is a major player in the hospitality industry and has made available a wealth of data from their system that spans many regions. The dataset covers aspects such as Accommodation Listings, Host Information, Year-round availability, Neighbourhood information, Customer Reviews, Host Verification etc.

Customers (specially travellers) like to have access to a centralized interface where they can find ideal accommodations, book and manage reservations, make payments and so on. On the other hand, hosts also prefer to have a system where they can list and manage their properties.

Given the form of dataset we have from AirBnb, one of the aspects it lacks is the detailed customer and reservation information. **For customer data**, we intend to extract unique records from reviews (which is limited to customer-id & name) and use them (if required) to derive more feasible attributes for the corresponding customers. **Booking/Reservation data** is not directly available in the dataset. However, we wish to allow such features in our system (refer below) & populate it through interactions with the interface.

In accordance with the project proposal requirements, we intend to do the following:

- Use North-America specific dataset from Airbnb.

- Translate the dataset to a proper relational model, with multiple entities and relations.
  - At a first glance, we see scope for nearly 7 to 8 relations (including 2 to 3 specializations) for an overall 40-50 feasible attributes.

- Pre-process data and generate new fields from existing ones, as described above. And populate the database in accordance with the relational model.

- Create an interactive interface that allows features specific to 2 entities:
  Host:
  1. Add/Remove/Manage listings
  2. Manage Reservations
  3. Access anonymized reviews
  4. Manage Host-Account

  Customer:
  1. View Available Listings
  2. Book accommodation, manage reservations and make payments
  3. Review listings (for which reservations were made by the customer)
  4. Manage Customer-Account

  We expect to cover approx. 75-80% of these features for the final deliverable.

- **Data mining:** We have not yet finalised on this aspect. E.g. "What category of listings (in regards to place, price, etc) tend to be more in demand ? " could be a potential use case.
  However, we are currently exploring more such questions and will have more clarity, once we are exposed to the data mining section of the course.

References

[1] AirBnb, http://insideairbnb.com/get-the-data/