# APMA E4990 Project: EZStay

Team Members: Yiyi Zhang, Yilin Lyu, Shan Guan, Liangliang Huang

#### Background

Are you a visitor to Boston and trying to find a place to stay?

Do you have trouble deciding whether to stay at hotel or home?

Do you concern about the safety around the area?

Do you want to spend less time reading the long list of reviews?

EZStay is here to facilitate your search process!

#### Data

#### **Hotel Reviews:**

https://www.kaggle.com/datafiniti/hotel-reviews

**Boston Airbnb Open Data:** 

https://www.kaggle.com/airbnb/boston

**Boston gov: CRIME INCIDENT REPORTS (AUGUST 2015 - TO DATE):** 

https://data.boston.gov/dataset/crime-incident-reports-august-2015-to-date-source-new -system

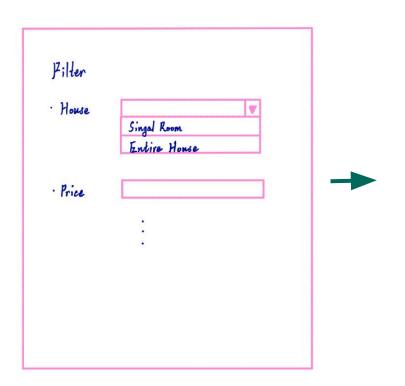
#### **Project Goal**

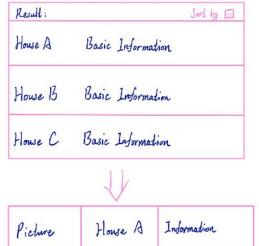
Part 1: Create a booking website with both hotels and Airbnb information

Part 2: Help users choose a place to stay with safety/crime information

Part 3: Extract short tags from long reviews to help quick decision

#### Website Snapshot





Comfortable, Accommodating. Neighborhood

Price Pridection & Safety Rate

Search Houses by Filters

**Display Results** 

Show Tags and others

### Quick review using tags

Apply TF-IDF for the long users' reviews

Train a LDA model for tags of a hotel or apartment

Compare
owner
description and
user reviews

Quick search of reviews and similar accommodations recommendation

## Quick review using tags--Example

#### Rebecca has a Comfortable | Comfy | Cozy | Accommodating house

- 1. This is an amazingly beautiful and comfortable home and Rebecca was an awesome and attentive host. The home is lovingly restored with gorgeous bathrooms, a wonderful kitchen, and big comfy beds! Phinney Ridge is a cute little neighborhood too, with close proximity to food markets and restaurants. The home has great space and she was incredibly accommodating for our baby, providing a pac n play, car seat and high chair.
- 2.Rebecca's home was in the perfect location and was comfortable for getting the whole family (or a group of friends all together.) We all loved the historical aspect of the home and the neighborhood.

  3.This is an amazingly beautiful and comfortable home and Rebecca was an awesome and attentive host.
- 4. The kitchen was well equipped for cooking, the fireplace was lovely, and the beds were super comfy.
- 5.The house was super cozy, very comfy, had everything that we needed for a full family to live, cook, hang out, and have a relaxing stay. Rebecca was absolutely amazing and helpful.