

APMA E4990

Project: EZStay

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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

Filter

- House

Singal Room

Entire House
- Price
- :
- :



Result: Sort by	
House A	Basic Information
House B	Basic Information
House C	Basic Information



Picture	House A	Information
Tags: Comfortable, Accommodating, Neighborhood ...		
Price Prediction & 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.