

Team 6 - Project Backlog

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* Temporary logo for Project Backlog

Problem Statement:

Currently, listers on booking platforms such as Airbnb are generally allowed to omit details that a renter may consider significant. For instance, a renter would likely want to know if the property is in a bad neighborhood, if there isn't access to commercial stores and restaurants in the immediate proximity, and reviews both positive and negative about the booking. Consequently, there is a need for a service that provides these details automatically without much effort on the renter's end. Existing services are fragmented, will only factor in price, are oriented only towards the lister, or do not display all of the relevant information in an easy-to-access and intuitive way.

Background Information:

Audience

In 2015 alone, 180 million people visited one of the many travel sites on the web. We are targeting our web browser extension at those who want a simpler way to make sense of the different listings on each site. We do understand that not all users are technologically adept enough to go out of their way to download our web extension. That is why we are also building a web application with a simple user interface for anyone on the web to use to find out information

regarding specific listings without having to register an account with us. We are targeting people of varying technological literacy levels who simply want more transparency in the online booking process.

Similar Platforms

There are quite a few notable similar platforms out there. Chief among them are Trivago, Hoteloogole, Zumper Research, Rentometer, and Rent Jungle. The key aspect shared among these are that they collect a lot of data and use that data to inform the user.

Limitations

BetterBnB is largely limited by access to data. As a service whose entire platform is built upon relaying information to the user that they'd otherwise have to research themselves, if we don't have access to relevant data about a specific listing, then there is little we can do about the listing in terms of displaying relevant information. However, this limitation is restrained by the fact that our goal is to reduce the time of consumers researching listings themselves. If we are unable to access that data, then the consumer likely won't be able to either, and thus we still save them time from attempting to find information on the listing.

Remarks:

A lot of the user stories we have backlogged are highly reliant on whether or not data is available for the given concept. For example, we hope to implement and display information regarding local handicap accessibility, but such information obviously may not be available to the specificity that would be necessary to meet the standards that we expect.

Functional Requirements:

1. As a user, I would like to be able to get a safety rating for a listing on a residence booking website so that I'm assured that the listing is not in a bad area.
2. As a user, I would like to be able to see a combination of reviews from different review sites including but not limited to Google Reviews, Yelp, alongside reviews from the site the booking was originally listed on, so that I have centralized access to firsthand accounts of the listing.
3. As a user, I would like to get a list of restaurants that are located near a listing on a residence booking website so that I know just how accessible food and dining is.

4. As a user, I would like to register for a BetterBNB account so that I can easily access the information of the listings I've looked at.
5. As a user, I would like to login to my BetterBNB account so that I have access to all of the recent listings that I've looked at without having to mark them myself.
6. As a user, I would like to reset my password for my BetterBNB account in the case that I don't recall my original password so that I don't have to go through the steps of creating a new account.
7. As a user, I would like to save listings to my account for future reference in a centralized manner so that I don't have to navigate to listings over and over.
8. As a user, I would like to get a list of recommendations for a booking based on previous bookings and preferences so that I don't have to spend a lot of time looking for a listing that fits me.
9. As a user, I would like to see a dashboard containing all my saved listings so that it's not necessary to store my viewed listings in a file or other type of storage locally.
10. As a user I would like to remove listings from my saved listings so that listings that are no longer relevant to me don't clutter up listings that I am considering for the future.
11. As a user, I would like to easily navigate to any of my saved listings from the Dashboard of the website so that I don't have to spend time 'learning' the site in order to understand the layout.
12. As a user, I would like to add a listing to my saved listing using a link to the residence booking website, so that I don't have to install the extension and view the webpage in order to get the benefits of the software.
13. As a user, I would like to search for listings in my saved listings so that I save time from not having to sift through all of the saved listings in order to find the one I'm looking for.
14. As a user, I would like to receive a notification if information about a saved listing changes so that I don't have to track listings myself and so that I don't get caught off guard after renting a listing.
15. As a user, I would like to see my current listings ranked as most safe to least safe so that I feel safe and not vulnerable with the listing that I end up choosing.
16. As a user, I would like to be able to get the address of a nearby restaurant on the website itself so that I don't have to spend time finding the restaurant's address myself online.
17. As a user, I would like to see my current listings ranked in order of the best food in the surrounding area to worst food in the surrounding area so that I can gauge local food options when choosing which listing to finalize.
18. As a user, I would like the program to take into consideration how important population density is, so that if I personally prefer less people around (or prefer more people around), I can gauge the population density of each listing and determine whether or not that's comfortable for me.

19. As a user, I would like the application to allow me to select how much I prioritize certain types of food so that I wouldn't be recommended listings that I wouldn't choose based on the availability of certain types of food locally.
20. As a user, I would like the application to take into consideration how important quietness is for me so that I can choose a residence that suits my preference.
21. As a user, I would like the application to take into consideration how important proximity to the center of town is for me so that I can choose a residence that suits my preference.
22. As a user, I would like the application to take into consideration how important wheelchair accessibility is for me so that I know that I'll be able to get everywhere that I want to get to.
23. As a user, I would like the application to take into consideration how important access to medical care is for me so that I can feel assured that if I run into any outstanding health complications there is sufficient care for me.
24. As a user, I would like the application to take into consideration how important proximity to national parks and public outdoor areas is for me so that if that's the main goal of my trip, it's being met.
25. As a user, I would like the application to take into consideration how important points of historical relevance are to me so that I know all of the local sightseeing spots if I desire to see them.
26. As a user, I would like the application to take into consideration how important the forecast of the area is to me so that I can avoid areas that are expecting weather that I consider bad.
27. As a user, I would like the application to take into consideration how important proximity to bodies of water is to me so that if I
28. As a user, I would like the application to take into consideration how important the prevalence of a specific language in an area is so that I'm not stuck somewhere where nobody can speak to me if I need help.
29. As a user I would like to be able to see my current listings ranked as most suited to all of my previously mentioned attributes if I so choose so that I can choose the listing that is overall the best for me.
30. As a user, I would like to categorize a set of listings as a trip so that I can set up multiple listings in a row that would be in different places based upon where I'm travelling in my trip.
31. As a user, I would like to be able to customize the name of a trip so that I can easily differentiate between trips.
32. As a user. I would like to be able to remove a listing from a specific trip if I so choose.
33. As a user. I would like to be able to delete a trip so that I can remove it from my dashboard if I change my mind about a trip.

34. As a user, I would like to flag a listing if the information is inaccurate so that I can warn other users about the listing.
35. As a user, I would like to submit a complaint detailing specifics of a falsified listing so that I can get the listing flagged as misleading by an administrator.
36. As an administrator, I would like to be able to review user complaints about falsified listings so that I can flag a residence as misleading.
37. As an administrator, I would like to be able to mark listings containing false advertising if users provide evidence to suggest so that I can improve the experience for other users.
38. As a user, I would like to be able to see if a listing has been marked by an administrator as containing false or misleading information so that I can avoid booking that residence.
39. As a user I would like to be able to download a pdf containing information provided by the service about a listing so that I can access it offline and print it easily.
40. As a user, I would like to choose varying levels of complexity for viewing a published report on a specific listing so that I can get a general or more detailed information about a listing.

Non-Functional Requirements:

Architecture:

Since there will be numerous working components for our project, namely, one or more browser extensions and a web application, we intend to build out a robust backend that can handle connections from a variety of sources. In other words, our backend will have a fully fleshed out custom API solution with well designed endpoints that allow for simple, secure access. We intend to employ the use of Express.js and Node.js to accomplish this task. Our front-end will be built using the React.js framework which will result in a great, seamless experience for our end-users.

Hosting/Deployment:

Once we have reached the stage where deployment is necessary, we intend to use either the Heroku platform or Google Cloud to host our web application. Since we will be interfacing with MongoDB Cloud Atlas, this portion will be hosted using Google Cloud. For robustness, we may do away with Heroku in-favor of AWS (or AWS Beanstalk) which is known to be more scalable.

Response Time:

In terms of response time, a preliminary report should return a webpage in less than 3 seconds. Extension details should be almost instantaneous, approximately 100ms. Logging in should take no more than 100ms.

Security:

Security is important for BetterBNB because we will be storing user locations as well as login data. To ensure impregnability of our user's locations, they will be encrypted whenever we perform any database operations. To handle user logins, we'll most likely use an authentication library such as Passport.js to keep the process as simplified and as secure as possible. There will be varying levels of user permissions that we will include.

Scalability:

Low resource API calls. Stored listing details to avoid having to re-fetch later. Easily scaled database infrastructure. We're using the Mern stack, which allows us to be highly scalable since all of the cloud vendors and platforms support it.

Usability:

Simplistic design that is easy to use with no confusing menus or layouts that might confuse the user. Large varied customizable scope, user can select complexity/detail, default is simplistic.