TogetherTrek

**Team 13 - Product Backlog**

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**Problem Statement**

Travelling alone while abroad is fairly standard, but it can be unsafe to do so. Because of this, many solo travellers have taken to finding people to travel with wherever they may be in their journey. TogetherTrek makes this process easy by offering users ways to match with like-minded individuals in a safe and secure way. This is done through creating and sharing travel itineraries or finding others using the service near you. While there are many other services that allow users to find travel partners, like Gaffl, TogetherTrek is one of, if not the only, one that offers real-time safety features, trip budgeting, and groups of more than just 2 people.

**Background Information**

**Audience**

Trying to organize a travel group can be difficult at times, as many people cancel their trips due to unavailability or incompatible plans. This can be frustrating to the adventurous individual who seeks partners on their trips, but cannot find one. Adventures will want an option where people that meet their requirements are listed out.

**Similar Platforms**There are several existing traveling partner finders like Gaffl, Meetup, TripGiraffe, and Travello. Gaffl and TripGiraffe are similar websites to Craigslist, where the user lists their requirements and has interested people contact them. Meetup and Travello list events near a certain area where people can sign up as an attendee.

**Limitations**

None of these services offer a match-making algorithm, but instead require the users to look up existing trips planned by others or create new ones in hopes of a similar traveller that will come across their post, which does not ease the user’s side of planning. These websites do not offer the safety of the users when meeting new people. There is no defined way as to how much budget is spent between the group with these applications. And assuming the trip went well, these trips will require the users to share photos by their own means, instead on the website/app itself.

With TogetherTrek, we aim to ease the user’s end to plan for a trip by having unique features that are essential to a trip between a group of people who have never met before.

**Functional Requirements**

1. As a user, I need to be able to post that I am looking to go on a trip to a location
2. As a user, I need to be able to edit the posts that I make
3. As a user, I need to be able to delete my own posts
4. As a user, I need to be able to register an account
5. As a user, I need to be able to login in to my account
6. As a user, I need to be able to reset my password
7. As a user, I need to be able to change my password
8. As a user, I need to be able to change the email address associated with my account
9. As a user, I need to be able to sign out of my account
10. As a user, I need to be able to edit my profile
11. As a user, I would like to be able to login using third party authenticators like Google
12. As a user, I would like to be able to block an unwanted user from viewing my profile
13. As a user, I would like to be able to report a user for inappropriate behavior.
14. As a user, I need to be able to create trips
15. As a user, I need to be able to set an upper limit to the number of people in a group
16. As a user, I need to be able to add specific people to a group
17. As a user, I need to be able to remove people from a group
18. As a user, I need to be able to prevent more people from joining a group
19. As a user, I need to be able to mute notifications from a specific group
20. As a user, I would like to get emails about special offers
21. As a user, I would like to connect social media accounts to the profile
22. As a user, I would like to get reminders to personal email
23. As a user, I would like to get reminders to personal phone number
24. As a user, I need to be able to join trips
25. As a user, I need to be able to share my location
26. As a user, I would like to be able to see people in my area that I can meet up with
27. As a user, I would like to be able to quickly get emergency contact information for local authorities
28. As a user, I would like to be able to see the total amount and my share of group costs
29. As a user, I need to be able to send private messages
30. As a user, I need to be able to send group messages
31. As a user, I would like to be able to share photos/videos with my group
32. As a user, I would like to be able to share particular photos/videos on social media
33. As a user, I would like to have suggestions for safe meeting spots
34. As a user, I would like to be able to suggest a meeting spot to another user
35. As a user, I need to be able to verify my profile
36. As a user, I would like to be able to search for trips with filters for location and planned budget
37. As a user, I would like to be able to have the trip budget broken down into categories.
38. As a user, I would like to be able to download uploaded photos
39. As a user, I would like to get a trip summary with highlights of the trip
40. As a user, I would like to share trip summary on social media
41. As a premium user, I would like to be able to upload more photos than a standard user
42. As a premium user, I would like to be able to control who sees me when searching
43. As a premium user, I would like to be able to change the theme of the chat
44. As an admin, I need to be able to edit any user’s posts
45. As an admin, I need to be able to delete any user’s posts
46. As an admin, I need to be able to ban any user
47. As an admin, I need to be able to see user’s posts
48. As a developer, I need a running database for data to be stored in
49. As a developer, I need a performant database schema so that requests are quick
50. As a developer, I need any stored data to be encrypted so that it is not vulnerable
51. As a developer, I need a running RESTful API to service requests from the front end
52. As a developer, I need the API to have any endpoints required for server requests
53. As a developer, I need to be able to create an auto profile and post moderation bot
54. As a developer, I need to be able to create an admin account
55. As a developer, I need to have a way to store users’ photos and videos

**Non-Functional Requirements**

**Architecture and Performance**

To create an efficient web and mobile application, we plan to create a backend that can service both applications using the same endpoints and data structures. The backend will use a node server connected to a MongoDB server to service requests. Backend requests should be serviced in less than 1 second for an optimal user experience. Also to ensure we can service all of our users, our backend should be able to handle at least 1000 concurrent requests. The automated moderation bot should verify images and text in less than 3 seconds while running as a background process to not interrupt app usage. The frontend web application will be designed with React and the cross-platform (iOS/Android) mobile application will utilize Flutter.

**Security**

Security is a critical differentiator for TogetherTrek. TogetherTrek will implement permission systems to restrict user access to data and will allow administrator roles additional access and controls. To protect user’s messaging records, messages will be encrypted using the signal protocol. API requests will be authenticated to prevent unnecessary requests. Auth0 will be used for user authentication which has bot detection, SSO, and many other helpful features.

**Usability**A clean, modern and intuitive user interface will be designed to appeal to young adults. It will also be straight-forward enough to appeal to a wider variety of users outside of our target demographic. By comparison, the user interface of similar platforms appear cluttered, utilize unnecessary nested menus and are not intuitive. We also want to ensure that our application will be responsive on all screen sizes and resolutions.

**Hosting/Deployment**

Because most of the different parts of our project are going to be entirely separate from one another, we can update and deploy them independently. We will be using separate Heroku “projects” to host our frontend web server and backend RESTful API. When we get far enough along in development, we will be using the Apple App Store and Google Play Store to host our mobile applications. We can use AWS Lambda to run the code for auto-moderating the content that gets added to the site and Amazon S3 to host the images and videos that users want to share with each other. To ensure a good user experience, premium users should be able to upload 10 GB of photos and standard users should be able to upload 1 GB of photos. For our database, we will be using a hosted cluster from MongoDB to store user data, posts, and trips.