EVALUATION

SUCCESS STATEMENT FOR OUR SYSTEM

TrailSeek for Social outdoor is built and evaluated using cognitive walk-through method then the success rate and user subjective satisfaction including the security of the application can be significantly enhanced based on following points.

1. Will the user try and achieve the right outcome?
2. Will the user notice that the correct action is available to them?
3. Will the user associate the correct action with the outcome they expect to achieve?
4. If the correct action is performed; will the user see that progress is being made towards their intended outcome?

EXPERIMENTAL METHOD FOR EVALUATIONThe overall evaluation design comprises of following phases:

1. Evaluating the product.
2. TrailSeek comparison with other similar products.
3. Technology Choices and their evaluation.
4. Analysing the results.
5. Success rate vs Error rate matrices.
6. User Impact on various performed tasks.
7. Success rate of TrailSeek.

EVALUATING THE PRODUCTThe experiment will be conducted allowing different types of users to use the product  
built. To accomplish this, the users will be approached in different environments like  
community parks, outdoor grounds, fitness clubs and neighbourhood areas in order to cover a variety of users. And, as mentioned earlier, Cognitive walkthrough Technique will be used to  
conduct the experiment with questionnaire methodology.  
Prerequisites will be set and considered for conducting the experiment by designing a  
set of tasks for the users in the form of test cases and guidelines will be provided for  
the same.

TRAILSEEK COMPARISION WITH OTHER SIMILAR PRODUCTS : Baseline modelThe baseline model considered for our evaluation is a product such as .  
while comparing with baseline model we found that Eventbrite is one of the biggest names in  
event management system hence it has been chosen as the best baseline model.

The evaluation metrics used for evaluating the product with respect to other similar applications would be as follows:

1. Success rate (whether users can perform the task at all)
2. Security (password metrics and data security)
3. Error rate
4. Users' subjective satisfaction.

TECHNOLOGY CHOICES AND THEIR EVALUATION:

we have selected React-native for the front-end. It’s cross platform support means we can target both Android and iOS users and since it uses JavaScript, we can have one language for the front end and the back end. Redux will be used for state management. As part of the (PM)ERN stack, the project will use React-Native on the frontend, Express and NodeJS as the application middle layer, and PostgreSQL and MongoDB to persistently store data in a client-server architecture.

Applying the CAP Theorem, two database systems were chosen. PostgreSQL will be employed to persist data that requires high consistency (login and user details), while MongoDB will handle data that presumes eventual consistency (activities, group events, trails, user profile pictures and user location) in a distributed master-slave model.

DERIVING INSIGHTS FROM ANALYSIS:Once we have addressed test questions, collected data from the users and  
analysed, we should have a good understanding of what problems might lead a user  
away from the product so that we can fix them.

At this point when we have insights from the analysed data, a brainstorming session  
will be conducted among the team members before deciding on the changes to make.  
SWOT analysis will be used to organize survey data into data that represents strength,  
weaknesses, opportunities, and threats of our product. This method helps to create  
effective business strategies.

***S***UCCESS RATE VERSUS ERROR RATE MATRICS:

User tasks are typically measured during usability testing after a user has attempted a task or tracked within a user’s session on application. Typical user task metrics that we will utilize:

**Task Success Rate**: The percentage of users who successfully complete a task. This will be the most popular performance metric that reflects how effective users are at completing tasks, where it requires that the task have a clearly defined goal or end point (e.g. login, sign up, join an event etc.) to measure the success rate.

**Error Rate**: The percentage of users who made a mistake during a task (e.g. clicking the wrong button, incorrect information etc.). Errors can tell us how many mistakes were made and which part of the product, how various designs produce different frequencies and types of errors, and overall, how usable something really is. Most usability issues can sometimes be the source of user errors, so we clearly defined what action constitutes a failure and whether partial failure is calculated as an error.

**Time on Task (Task Completion Time)**– The length of time (mins/secs) it takes users to complete a task, which is especially useful for measuring the potential impact on user productivity. Time on task data will be analysed and presented in different ways, but the most common way is to present the average time spent on each task. This is a great metric for diagnosing problems. But the time-on-task metric gives more insight in a dynamic view, when comparing the same metric for different iterations. Generally, the smaller time-on-task metric, the better user experience.

* **Ease of Completion** – The ease with which users were able to complete a task. The single ease question (SEQ) is a good way to capture this.

Chart, scatter chart

Description automatically generated

USER IMPACT ON VARIOUS TASK PERFORMED:

If a user shares an event, it will attract a greater number of people as it will advertise the event to an end number of users making it more user friendly and attractive. Whereas, if a user likes an event, the event will get popular and will show users interest showing how the content is resonating with the audience, how event is growing and provide us with an awesome overview of how your strategy is performing.