



mapshot

Every location has a story

Sydney Adler, Alison Cundey, Esther Park
Lehigh University - User Interface Systems and Techniques

Overview

Lehigh University is a private university located in Bethlehem, Pennsylvania with total student population of 8,651 and campus size of 2,358 acres. Due to the size of campus and the lack of effective communication, students are often unaware of the events and opportunities around campus. The purpose of *MapShot* is to provide Lehigh University students with a location-based photo sharing application giving students access to real-time information about events happening on campus.

Design Principles

Consistency

Mechanisms should be used the same way whenever they appear.

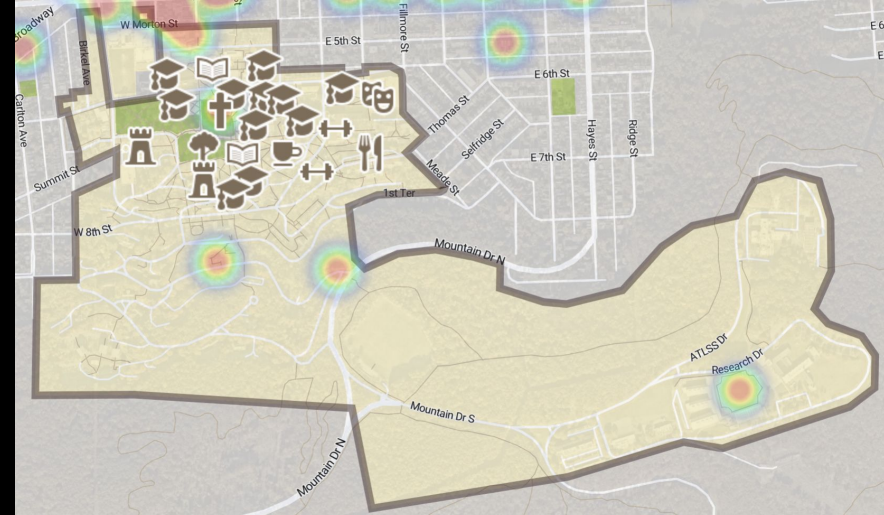
1. All clickable buttons on the home screen opens an identical pop-up feature allowing users to select view or upload
2. Heatmap intensity was used to identify the number of photo posts per location
3. All academic buildings are labeled with the same icon
4. All dining services are labeled with the same icon



Limitation & Negation

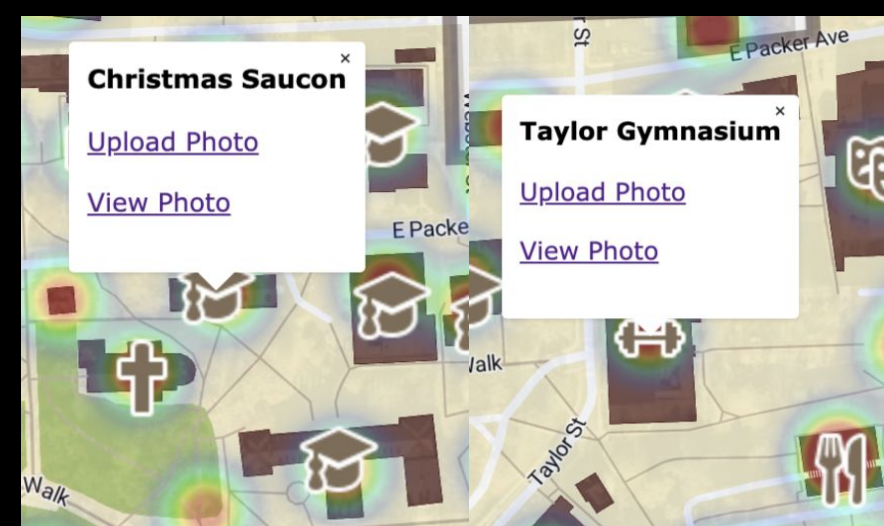
Designing around the absence or around features.

1. Map navigation is limited to Lehigh University Asa Packer Campus with bold grey borders and shaded regions
2. Photo visibility is limited to 24 hours after posting



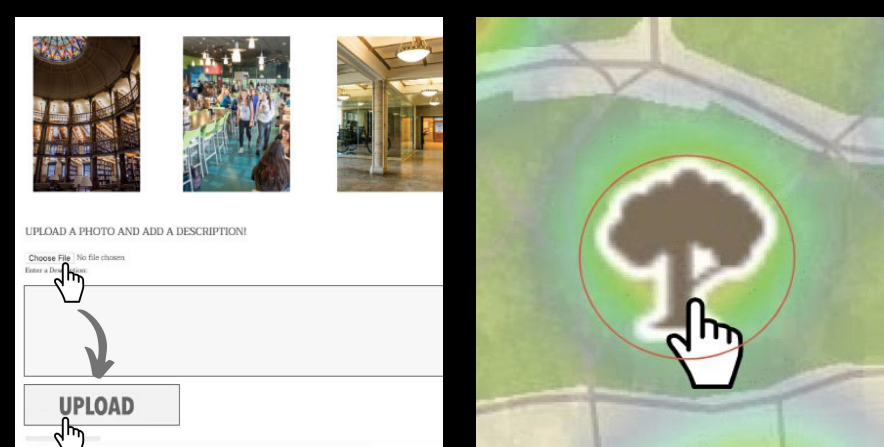
Modal vs. Modeless Interaction

When a user clicks on a selected location to view/upload a photo, a pop-up box appears while permitting users to access the parent window (home screen). Only after selecting whether to view or upload, the user will be taken to a new window (Modal).



Fitts' Low

Minimal distance between clickable features/targets that are easily identified with oversized icons. Separation between target buttons is minimal on upload page. Upload photo button, the biggest target, is large and bold. Large radius for clicking icons on map.



Evaluation Results

1. Users were asked to locate and upload a photo of the Rotunda at Linderman Library. Users were asked to repeat the task at a location of users' choice.

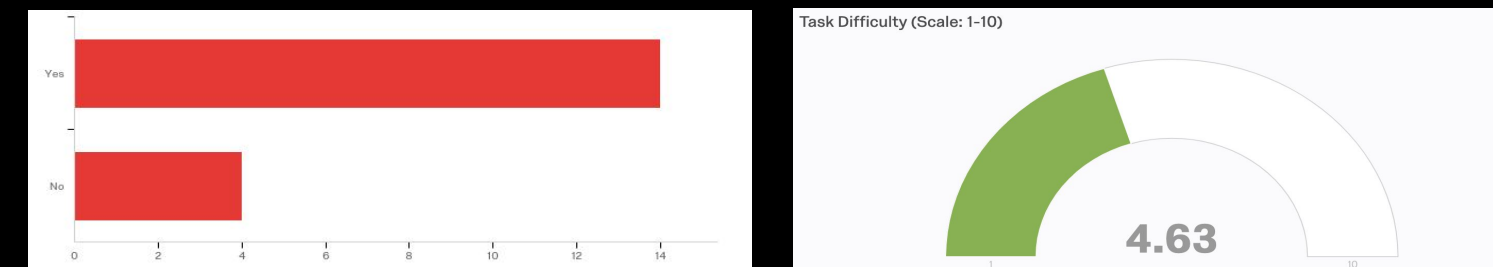


Figure 1: Task Completion and Level of Difficulty (1-10)

2. Users were asked to identify 1 or more problem(s) encountered while completing the tasks

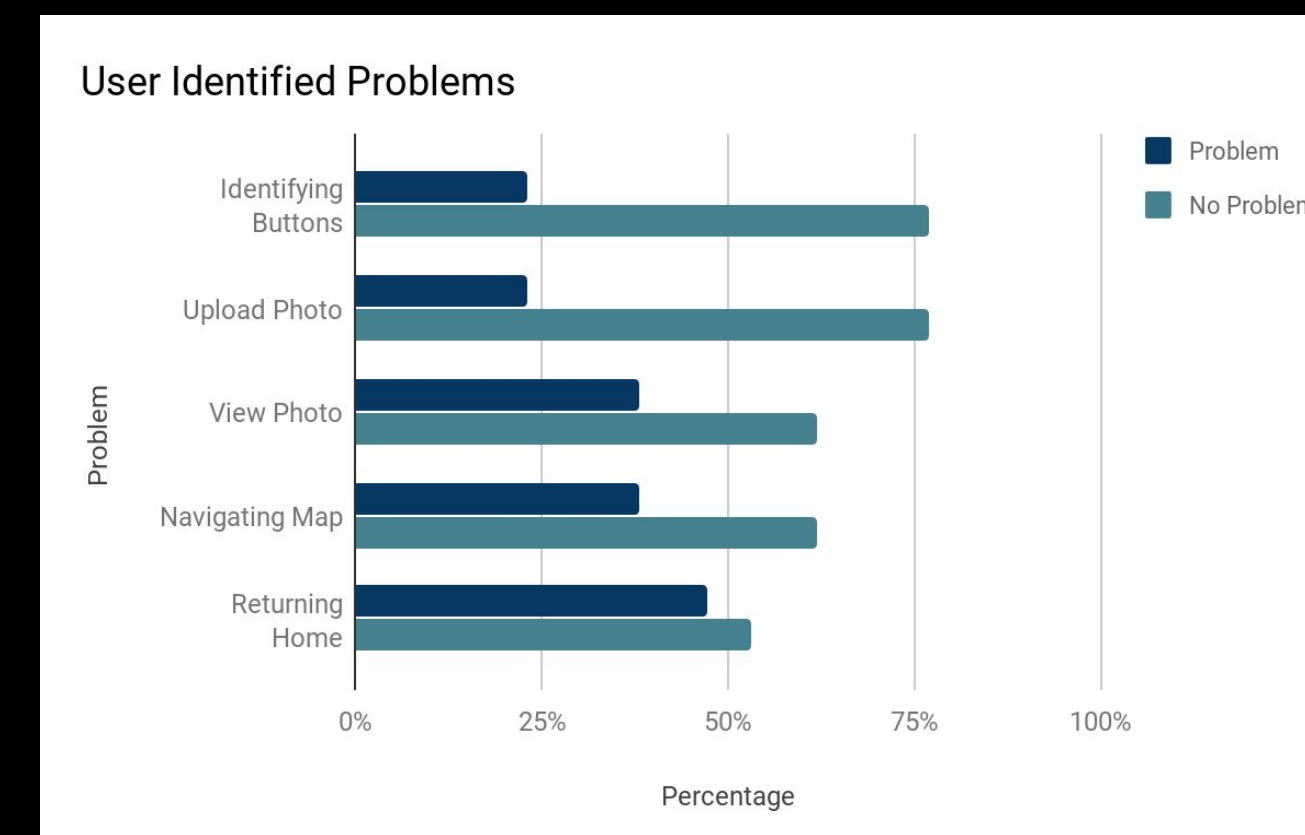


Figure 2: User Identified Problems

3. Users were asked to select a location on the campus map and view the photos there

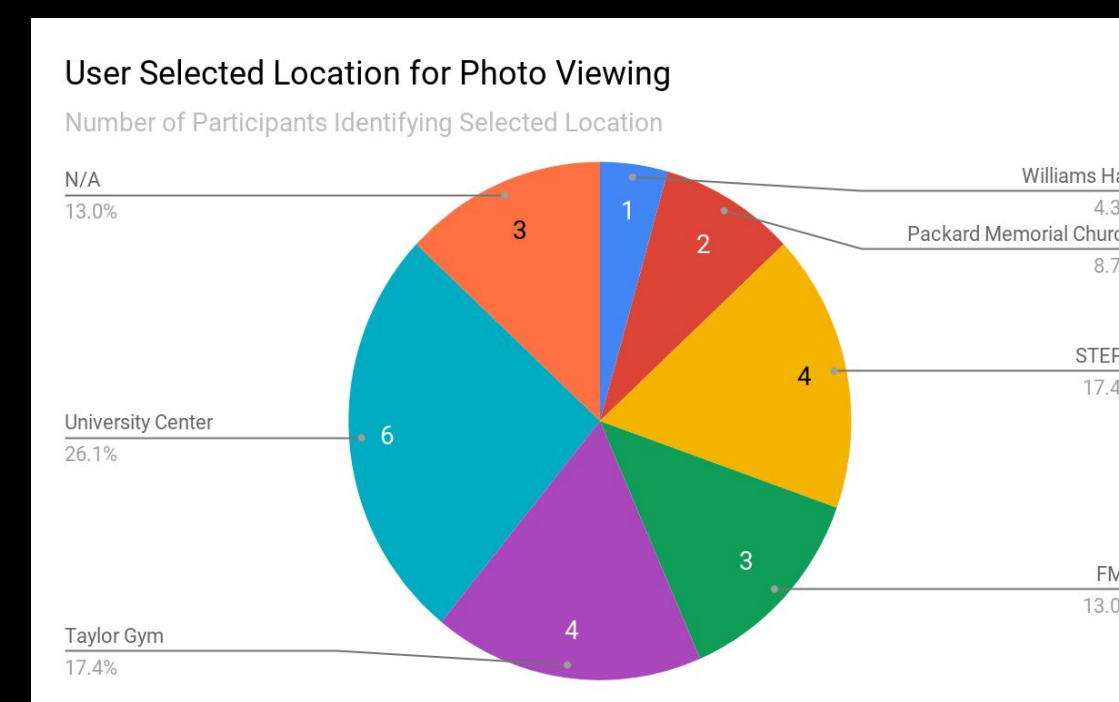


Figure 3: User Selected Location for Interaction

4. Users were asked about the completion of given tasks and their overall satisfaction with the system

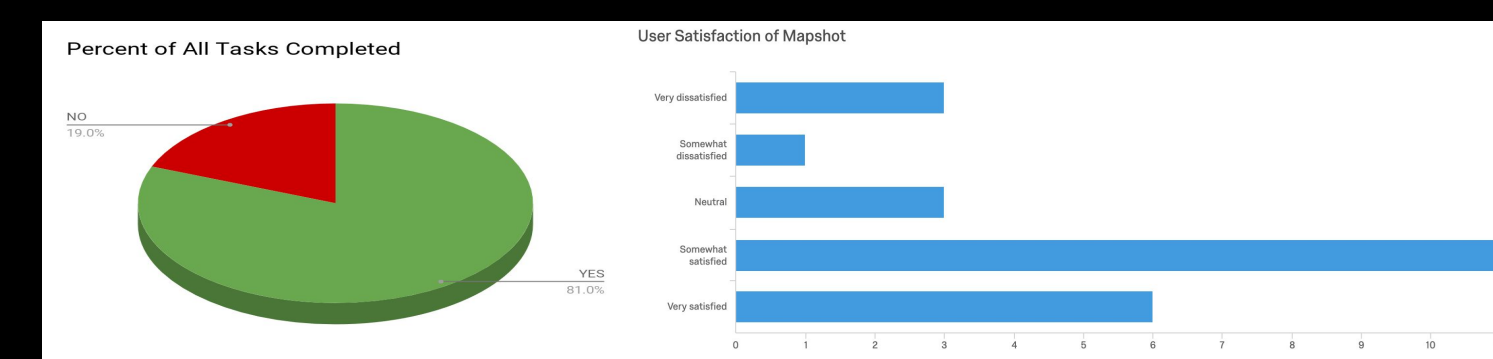


Figure 4: User Satisfaction of Overall Application

Our Design



Evaluation Analysis

1. The first specified task had a **77%** success rate, however the average difficulty rating on this task for users was **4.63** on a scale of 1-10. This data shows users who are unfamiliar with the system have a difficult time navigating the interface. The most effective solution would be to include a navigation bar that guides users through the app in a more intuitive way.
2. The biggest issue users encountered while interacting with the system was returning back to the homepage. Adding a clear home button at the top of each page would be the best solution to this reoccurring problem.
3. The most clicked on location on campus is the University Center with **21.6%** of users choosing to upload a photo there. The least common location was Williams Hall with **4.3%** of users. It is proven that some locations on campus are more distinguishable without labels than others. Adding labels to each building will help users interpret the map more efficiently.
4. Overall, users completed **81%** of all required tasks. Users most often listed "somewhat satisfied" when asked to rate their experience with Mapshot. While the design of the interface allowed for users to complete specific goals, the system was not as intuitive for navigation as needed for our target users. Improvements for design flow would be adding a menu bar with tabs for each page of the app, and clear labels for each location on the map.