AFRITO: Group 33

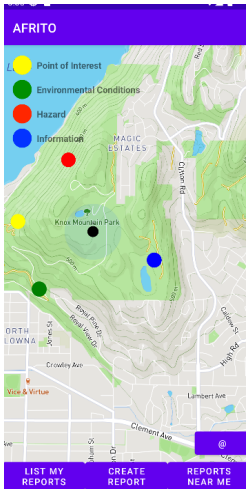
App for Reporting In the Outdoors:

Brief description:

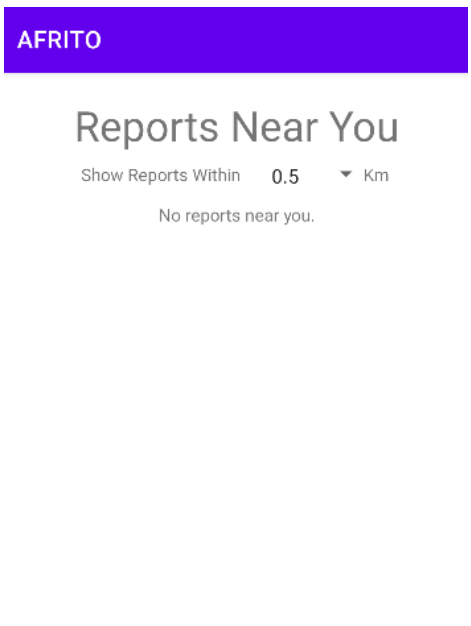
Our system, AFRITO, provides outdoor enthusiasts an intuitive, easy-to-use outlet for reporting events within the wilderness. It is based on the MAPBOX API and allows users to create report pins and view their own / other report pins. Our first major task focused on implementing an interactive map where users can navigate around their surrounding location. Our second major task entailed report creation and viewable reports on the interactive map. After implementing functionalities for creating and viewing reports, our third major task allowed users to manage their existing reports (edit or delete a report). Our fourth major task outlined the creation of a conditions board, where recent reports (based off of km proximity) and general weather conditions would be displayed. Our major design changes were abandoning the search bar / location header, the multiple map layer button, and changing the conditions board to a list view of nearby reports. We believed that the search bar / location header were redundant attributes as a user can zoom out / in to find their own or a general location (i.e. city or country). We abandoned the map layer button and the weather conditions feature mainly due to time constraints and practicality of project scope. In return, we agreed on implementing the nearby reports as a major task.

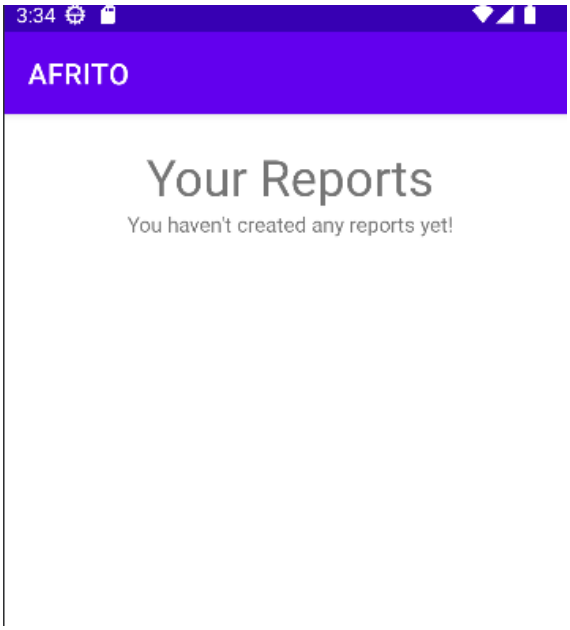
Design principles applied:

Visibility: Our core features are all immediately visible, labeled, and clickable. Upon opening the app, the user is able to scroll on a map and center on their current location. They can also press the clearly visible buttons to create a report, list their reports, and go to reports near them. More advanced features are specific to their own pages and do not clutter the home page. Example 1: All of the main task buttons are visible from the main screen. Example 2: More intricate features are in specific task pages, eliminating clutter from the home screen.

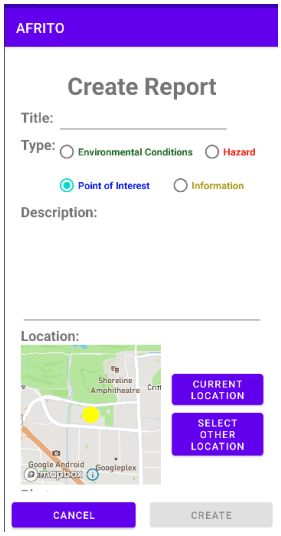


Feedback: Feedback is central to our design - as the use cases for our app often involve dangerous situations, in which one needs to know whether their app is functioning as it should, and whether they can expect their input to function. As such, there are pop up toasts messages, indicating when there's a factor that's preventing the user from, for example, being able to display and send their location. Example 1: If user location is disabled, a toast message will pop up asking user to enable their location. Example 2: Messages on reports and reports near you page to inform the user if there are no reports.

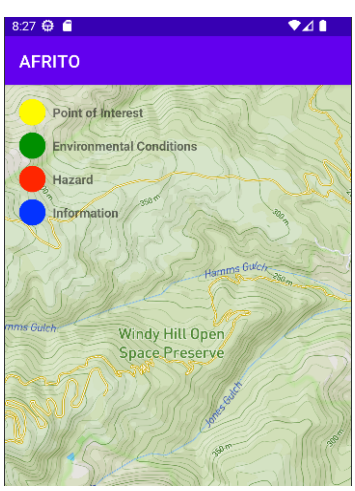


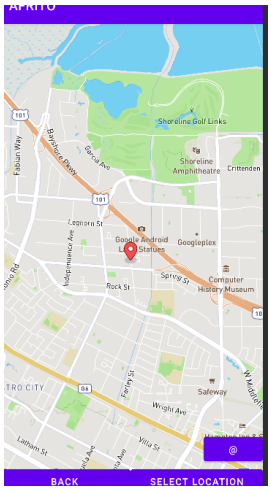


Constraints: Being able to make accurate reports is essential to the functioning of our app. It is very important that report pages don't get cluttered by random information. Therefore, on the create report page we made it necessary to have a title and type for the reports. Unless the user has put in a title and selected a type, they cannot create a report as the create button will be blanked out. Based on evaluation feedback, we also implemented a delete report button, to allow users to recover from mistakes. List report pages both inform the user that there are no reports made if that is the case. Example 1: The create report button is blanked out. Example 2: There is a pop up asking user to enable their location

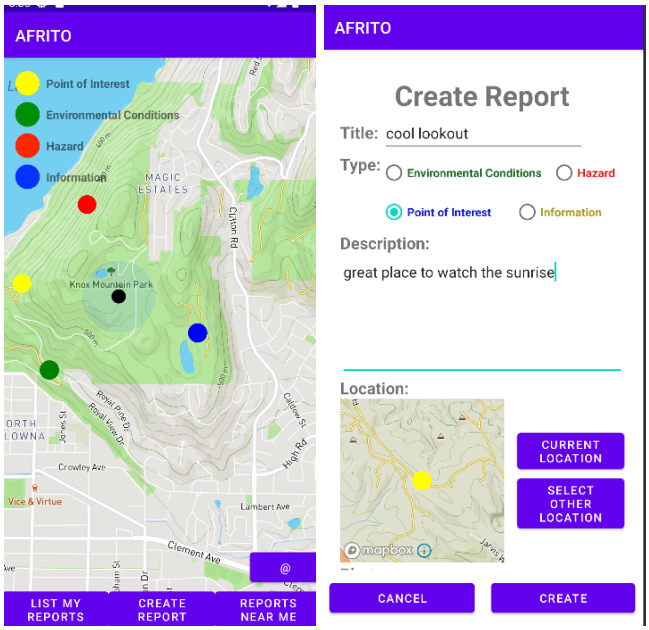


Affordances: Affordance is crucial in our design. We made our map scrollable and clickable, which is very intuitive to any user that has used a map application before. When selecting a location on the map, the user can click where they want which is sufficiently intuitive. The @ button logically returns the user to their current location. The buttons are simple and are labeled to take the user to that specific screen. The types of reports are also color coded everywhere for consistency, with red being a hazard, and green being environmental. For our create reports page, the user can only select one type, this is done through radio buttons, where the previous selection is cleared when a user changes their mind. Example 1: The types are color coordinated and legend is provided on the home screen for ease of use. Example 2: Map is scrollable and user can select location



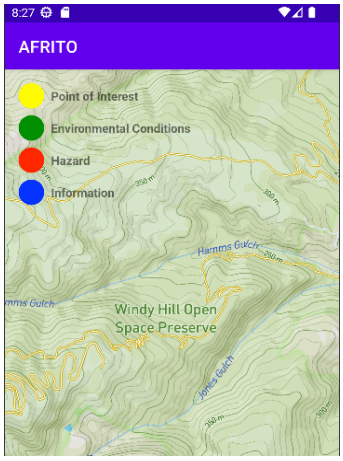


Simplicity: Our app is designed with simplicity in mind; our users expect to use the app in adverse conditions, so all of our touch targets are sized appropriately to increase usability when touch-sensitive gloves are worn, or when there's some snow or water on the screen. This dedication to simplicity is also manifested in our app's lack of bloating, meaning all of our features are essential to the use of our app, and the addition of superfluous features has been prevented. Our users can expect to see a feature for the first time and know exactly how to use it, with a minimal learning curve. Example 1: Intuitive main screen with labeled buttons, scrollable map. Example 2: Intuitive create report screen with labeled buttons, set current location option.



Matching: Our features are designed to be similar to other apps users are acquainted with, and paired with the simplicity of our design, users can expect to know exactly how to use every feature. Symbols, abbreviations, and buttons are inspired by ones our primary users have seen before in magazines, guide books, poster boards and other sources we are confident they've seen and used before. Examples include our buttons, map scrolling, and setting a pin on the map. Refer to photos above.

Help: We did not feel the need to create a user manual as our app is very intuitive. We are confident that anyone that has used a basic map service will be able to navigate our app. Our buttons are labeled, the report types are color coded, and the map is scrollable/clickable. There are also pop up toasts messages, indicating when there's a factor that's preventing the user from, for example, being able to display their location. Based on new feedback, we added a legend on the home screen describing what each of the types are, as well as removing abbreviations of types in the create report page. Refer to photos in simplicity for labeled buttons/features.



Summary of problems, ranked by severity:

Edit reports
Issue(s): Not able to remove/delete report
Severity(0-4): 3
Heuristics violated: Help users recognize, diagnose, and recover from errors/ functionality

Report lists
Issue(s): Reports are not clickable
Severity(0-4): 2
Heuristics violated: recognition over recall

Main Activity/Map
Issue(s): Add legend for report colors, explaining what each color means
Severity(0-4): 2
Heuristics violated:recognition over recall

List reports
Issue(s): Spinner too small
Severity(0-4): 2
Heuristics violated: Consistency and Standards

Create Reports
Issue(s): Abbreviations look unprofessional and can be hard to remember
Severity(0-4): 1
Heuristics violated: recognition over recall

Summary of changes based on heuristic evaluation:

-Created a delete report button, this was definitely our most severe issue as user could not recover from mistakes, nor could they get rid of outdated information.
-Put borders around each report in the my reports screen to make it more obvious that they are clickable
-Added a legend on the home screen of report types. Colour coded to allow recognition over recall.
-In the create report screen, removed abbreviations for the type of reports and instead listed the full name. Allows for a more understandable system for new users.
-Increased spinner size in the list near reports to create better consistency.

Video:
Final Video FINAL - 1670282548010.mp4