W^3 – Weekend Warrior Weather

The weather app for outdoor enthusiasts

Concept

Outdoor enthusiasts like rock climbers, hikers, and mountain bikers have different weather needs than many people. Rather than being concerned about the weather in a single home or destination location, they may compare multiple sites within travel distance. And, they may be looking for different things at different locations – different places and activities may be better suited to different weather conditions. And most uniquely, yesterday's weather matters – trails or rock faces may be closed or unsuitable for use for days after a heavy rainstorm.

W^3 provides an app for these users. It's sports-specific, and provides features that address these unique challenges of outdoor users. And, it integrates into their trip-planning experience through weather alerts and forecasts sent to their inbox a few days before the weekend, or at the frequency of their choosing.

Our Users and Their Needs

Due to the limited 8-hour budget of this project, we have not conducted any customer interviews to validate our assumptions about potential users' current weather app usage, frustrations and satisfaction with what they're currently using, and their trip planning process. This type of customer research provides a solid foundation for selecting features, prioritizing the hierarchy of display of individual features, and even verifying if the app should be built at all. In lieu of this information, these are the assumptions I am making about potential users when choosing how to prioritize potential product features.

Assumptions

- Outdoor sports enthusiasts care enough about weather to use a sports-specific weather app.
- Comparing weather at multiple locations side-by-side will help users make faster, better informed choices when trip planning.
- Temperature and precipitation forecast can be correlated to how good a day it will be for an outdoor activity.
- Specific locations may have different criteria – i.e. higher temperatures may be more acceptable on a tree-covered hike than on one out in the open.
- Historical data is important – if the trails are wet from yesterday's rain, it doesn't matter if it's sunny today. This should be second-tier information but still provided in snapshot views.
- Users will typically prefer one sport, but should be able to save preferences for multiple sports.
- Sharing forecast data with friends is valuable to users.
- In addition to weather, travel time is an important consideration when comparing locations.

Key Features

To engage and retain casual users, the app needs to be simple and immediately useful, without requiring much configuration to produce interesting results. But, as users get more involved they need to be able to customize and configure the settings that define how the weather influences their sport(s) of choice, specific locations that may have different criteria, and their personal preferences. I've broken down the feature summary by how advanced the user is.

First use

- Search location by park name, city name, or lat/lon.
- Integrated summary of past 1 day and upcoming 3 days (rain, temp, 'feels like').
- Adjust the timeframe of the forecast view.
- Select a sport (bike, climb, etc.) to show an activity score for that location – Perfect, Ok, Poor.
- 'Quick view' of past searches are appended to the search page.
- Selected sport persists across locations unless manually changed for a specific spot.

Regular user

- Save favorite locations – these appear alongside past searches.
- Attach a specific sport(s) to a location.
- Receive weekend planning emails – a Thursday afternoon summary of your favorite forecasts and their associated activity scores.
- Adjust your criteria for activity scores (ideal temp, chance of rain threshold).
- Send comparison summaries to friends.

Advanced user

- Modify location-specific criteria for activity scores.
- Connect their account to other apps like MapMyRide to import favorite locations.
- Create alerts for specific weather conditions.

Additional Considerations

Suggested Paid Services Needed for Development

Two core components needed by this app – mapping and weather forecasting – are very difficult to create from scratch. I recommend using paid services to provide this functionality, which will require an ongoing cost of running the app. Additional suggested services include email notifications and, due to the dynamic nature of this app, server hosting. These should be the only externally provided services needed for the proposed design – all other components will be created from scratch or provided by open-source packages that are freely available.

My initial recommendations for these are as follows:

- **Mapbox** provides an easy to use, configurable service for creating maps with pricing that starts free for our initial launch and scales with usage. (pricing summary)
- **Forecast.io** powers the popular Dark Sky mobile weather app. It can provide both minute level forecasts for the near term and standard hourly and daily forecasts, plus historical observed weather, with a simple API with pricing based on usage. (pricing summary)
- **Sendgrid** is one of the most widely used transactional email services. It requires a base of $9.95/month and scales with usage. (pricing summary)
- There are many options for server hosting; **AWS** is one of the most flexible and affordable.

Comparable tools and examples

In this quick assessment, I looked at existing weather apps as well as searched for apps already providing this service.

- Climbing Weather provides forecasts for 300 climbing sites. I was unable to find any other comparable sports weather specific apps within the project timeline, but more competitor research is recommended.
- Dark Sky is a highly praised weather app; however, as noted in the project prompt there are also many other weather apps to look to for inspiration

Future Expansion

I have presented the project scope that seems like the best compromise of development effort and available features – although I did not have a project budget to base this estimate off of. Naturally, many more features could be added or considered.

One area to consider expanding relates to locations. Due to the complexity of managing the data of sport-specific locations, we have not recommended including a cross-user library of common locations. However most sports have fairly specific locations that are well known within their communities but not well tracked by general purpose mapping services like Mapbox. Future updates to the app could include both user-submitted and externally-provided site locations like specific trails or climbing routes.