

Research Document

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Komoot

iPhone App Features

Komoot designates several different forms of transportation; as such, there are a variety of different locations visited by participants in different activities. Notably, Komoot insists that users rating an area actually visit that area first, which limits hearsay as a problem and increases the value of users who are more active on the app. Each route plan or recording is a Tour, made by aggregating a series of GPX coordinates into a single file.

Discover: Komoot allows users to bundle Tours into collections for sharing. Individual tours or collections are displayed in Discover, which can be searched. In addition, there is a social media system for users in which they can "follow" to see another user's shared activity, bookmark tours and collections, share links to things they've found on Komoot, and find new places to visit.

One notable feature helping to keep Komoot's ecosystem healthy for users is that some features, especially those involved with interacting with the tours and activities of other users, unlock with participation in Komoot's activity features. For example, only people who have publicly displayed tours and highlights (personally experienced) on their profile can review and rate (thumbs-up or thumbs-down for helpfulness) tour highlights on others' profiles. Further exploration is needed to find more features not visible until unlocked.

Plan: Both the Plan and Record features start with choosing a transportation method. There is a toggle switch for whether a vehicle has a motor (E-bike), but the rest is selecting one from a list. The options are likely segmented based upon the assumption that people looking to use Komoot are enthusiasts willing to use the correct equipment for each task. The following are visible on the app:

- Hiking
- Mountain Biking
- Road Cycling
- Running
- Bike Touring
- Mountaineering
- Gravel Riding
- Enduro Mountain Biking

While this feature is easier to use on the Browser Interface, you can tap a place on an expansive map and start a Route Plan from that point. Alternatively, you can bring up a planning menu that allows you to list intended points from start through to the destination, and the app can chart a course for you.

New plans are saved as Planned Tours, which become Completed Tours once you've traveled a sufficient portion of the route in navigation mode (by using Start Navigation while examining a Tour). Tours can be sent to Komoot-paired devices, something I did not test as I only have my phone with the Komoot app to use anyways.

Record: This is the most useful mobile feature for less deliberate users: choosing an activity allows you to simply start along a path, while the device uses location information to track and plot your path

as you go. Along the path, you can use the camera on the device to take photos (the location of which are stored alongside the route; these can be used in the Highlights feature later).

Once you're done moving, you can end the location recording and Komoot will save the path traveled as its own Completed Tour, to be used as a future plan or proof of activity. Activity along the path in metrics such as distance, speed, elevation, and time are stored as well. The social aspect of Komoot is useful here, as users of Komoot who took the same path can be "tagged" to allow them to view the tour in their own Planned or Completed. For completeness, Likes, Comments, and Visibility controls are also part of the Tours interface.

The Highlights feature is used to add notes and markers to different areas of a Tour's route once completed. Photos taken can be uploaded if not taken through the Komoot interface, and location tags on the image files are used to correlate them to the route.

Shop: Komoot's business model begins with region-locking new users to their local area and requiring the internet for route planning. Offline maps for regions and tours/plans outside of a user's immediate surroundings are placed behind a paywall. Individual regions cost \$2.99 dollars to unlock, while the global offline and routes bundle is \$29.99 (new users seem to get a discount if they decide to make a purchase early). The shop tab is dedicated to providing purchase services and advertising for the revenue stream of Komoot.

Some features are further limited to Premium Accounts, gained through a one-time purchase of \$59.99 for access to features such as creating Collections of Tours, Weather Integration, Komoot location-share, Multi-Day Planner, and Sport-specific Maps. I did not explore these features in my evaluation.

Profile: Settings, notifications (for the social, review, and sharing side of Komoot), a user's activity analytics, and personal timeline (history) are all bundled in this tab.

Browser Interface Features

On the Browser view, the tabs are Discover, Route Planner, Shop, Profile, and Settings. The larger window allows some things to be expanded, but the implied lack of mobility for a PC web browser means that Record is not available. The default page for a logged-in user is Discover. Route Planner has a side panel that extends into Discover as well, and the map has a far larger area; this means that viewing a larger region for planning purposes is possible compared to a phone or other mobile device. In addition, access to Komoot news and the company homepage are closer on the web browser site. The pages and features themselves seem to function identically to their app counterparts. One feature I noticed is that while logged in on the phone app, I could quickly send Tour plans from the web interface to the phone.

Conclusion

With this review, I can conclude that Komoot is actually rather feature complete, putting our project ideas in some jeopardy. Highlights along a route can be marked as "Not Recommended", which was a huge part of what our app intends to offer. Our team will have to explore what our final project actually offers compared to Komoot and its existing features.

GPX Download Test

While teammates have reviewed the features of GPX files, I was testing the requirements for various levels of access to the GPX files. It seems that an authentication token is necessary to access the download link for all but public tours on Komoot. This means that unless the sponsor decides to apply whatever app we make only to public tours they've created, we will have to accommodate authentication. While we were already aware that we'd likely require it, we should likely add a method of authentication into Komoot sooner within our own app.

PWAs

While building an app from scratch is always an option, we should note the differences between apps written for a specific platform, web apps (which can be platform agnostic in limited circumstances), and PWAs (which run an isolated web browser window as the app).

Specifically, what Expo builds is a hybrid PWA that can extend into some native functions using a shell customized to each ecosystem. In addition, it provides the function to automatically build a native version given the PWA, within certain limitations. However, security limitations mean that Expo builds can never achieve the maximum function available to native apps. The tradeoff is in the difficulty: building native apps (especially in the iOS ecosystem) is often harder and requires more setup. The cost of making native builds with Expo is that each update to the Expo core has to be manually fixed when building a new native version alongside that update.

We will likely only ever be able to test our apps on iOS using Expo, which means that we will have to consider workarounds or feature cuts if we encounter the need for something on iOS that the Expo PWA cannot provide. This is not a concern on Android, as the Android emulator provides a highly customizable testing environment for apps and can be integrated into our testing workflow.

Sources:

- <https://www.mendix.com/blog/native-vs-web-vs-hybrid-vs-pwas/>