

Roya Survey

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Roya Survey App

The Roya Survey App seeks to provide feedback to scientists working with long-term climate data to generate models predicting levels of risk for infection of coffee farms by the coffee rust fungus in Mexico. The app will allow coffee farmers to register and then provide several photos and a personal estimation of the degree of coffee rust infection in their farms that will then be compared to existing models predictions to help refine them. In exchange, farms will be able to send additional photos of other pests and diseases in their farms and a request for help in identifying them and obtaining suitable control measures.

UI domain

Roya survey app is a web based mobile app and the primary users are coffee grower. Each user is expected to “login” to post a new issue and upload photos. Before login each user have to sign up by providing their personal information. After login user can post new status. In the dashboard, a user can see different post from different users. Filtering option will be available in this that filter by area. After posting the issue scientist can comment on the post.

Heuristic usability principles

Ten Usability Heuristics by Jakob Nielsen

1. **Visibility of system status**

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

2. **Match between system and the real world**

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

3. **User control and freedom**

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

4. **Consistency and standards**

Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

5. **Error prevention**

Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

6. **Recognition rather than recall**

Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7. **Flexibility and efficiency of use**

Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. Aesthetic and minimalist design

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Usability problems and suggestions

1. On the Login page, help option would be helpful for the farmers. When they forget the password or need any types of technical help they can go there. (Help and documentation)
2. In the home page, a search box can be added from where farmer can search area or any specific issue. (User control and freedom)
3. In New Post, it will be better to write summary at the top and then add upload image option. It will be better if you add image icon rather than browse button. Soft keyboard will appear while you go to a new post page. (Aesthetic and minimalist design)
4. A small difference between low and lowmid range as well as high and midhigh range which is difficult to differentiate for user. (Recognition rather than recall)
5. There is no “logout” button in the app. This is a kind of user control problem. (User control and freedom)
6. A different filtering option can be added rather than general setting. The filtering option in setting is perfect okay, but the scientist more emphasis on filtering option. So you can add different filtering option. (Flexibility and efficiency of use)
7. Add “refresh” button or “ok” button in the error page. (Help users recognize, diagnose, and recover from errors)

Critical usability concerns

1. There is no “logout” button in the app. This is a kind of user control problem. (User control and freedom)
2. Add “refresh” button or “ok” button in the error page. (Help users recognize, diagnose, and recover from errors)

Critical usability based on the short story

Coffee farmer Mr. Lee is a primary user of this app. He created an account by providing all the basic information. Then he logged in into the app for posting a new issue and uploading new photos. After logging into the app he checked the dashboard for similar types of issue. Then he felt curious about the certain range of the area. He wanted to check that such types of issue are common in this area or not. But he confused how he check that. After long analysis he got that setting option give the filtering option. It would be helpful for Mr. Lee if he gets the filtering option individually. And when he tried to upload an image he lost the internet connection. After losing the connection he got an error message. But in the error message there was no “ok” or “refresh” key to refresh the page. He was confused what to do in this situation. After completing his update he tried to logout from the app, but he didn't get any logout option. So he worried about the data security.