

Evaluation Assignment 2 – Heuristic Evaluation

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1. Short Description of the undergrad design

The application is designed as a web application where the home page contains the general information about the Pacaya volcano for the visitors. From this home page, users can navigate to different options like submit observations, admin login. If user goes for submit observations, two forms are given to choose from. One form is about lava flows and another is plumes. Users fill out information like height and width about these and upload pictures using respective forms. Admin user can login and view or delete the submitted forms which are sorted in chronological order.

2. Identification of the UI domain and short description

The aim of Pacaya volcano monitor application is to gather data about Pacaya volcano with the help of tourists and tour guides who visit it regularly. Researchers e.g. Professor Dr. Greg Waite will then analyze these data and give proper predictions of the events at Pacaya volcano. So as a web application, this application need easy and quick access for the primary users to upload information and pictures. So there will be forms for the primary users e.g. tour guides to fill out information about the event at the volcano. The UI also needs to accommodate facility for visible photo upload option. Then for the researchers, the UI needs additional admin login page. It will give researchers access to the uploaded data (information and pictures) and analyze it. The UI also need provide good view of data in some order like chronological order and edit or delete form data.

3. List of heuristic usability principles for the design's UI domain

A list of usability principle for the suitable design's UI domain is given below:

- **Motivation:**
Primary users will provide data about volcano voluntarily. Even though they are helping with the research of the volcano and its monitoring, they still need motivation to provide data. So some kind of motivation like their uploaded pictures can be viewed and praised by others which can give them a feeling of accomplishment.

- **Efficiency:**

Users will use the application while visiting the volcano. So the application should be efficient enough so that the users can give quick access to forms or quick and easy upload of pictures.

- **Informative:**

The data provided by the users using the application should be useful and meaningful. So users should be given the important fields to fill up information about in the forms so that the data is formatted with proper labels and users can give specific information like at the width of the lava.

4. List of usability problems generated from the heuristic evaluation

Usability problems can be generated if usability principles are not followed. The main problems are listed as follows:

- **Lack of motivation:**

Users are not motivated enough to provide data while their visit to the volcano. So the application will lose its main purpose of gathering data about the Pacaya volcano if users do not upload information.

- **Inefficiency:**

If the application is not efficient enough like users cannot find the forms to upload the information easily or the option to upload photos, users will get frustrated and stop using the application. From the researcher's point of view, if the application is not efficient to show the forms properly in order, the researcher will have difficulty to analyze the data.

- **Not enough information:**

Users can get confused if they are not guided with what information to give about the volcano. Also the researchers can have difficulty to sort out meaningless data.

5. Identification of critical usability concerns

Critical usability concerns are given below:

- **Many useless posts:**
Users are not aware of what type of data are really useful or informative. So they will give lot of useless information. Also they can upload lots of pictures unrelated to the data they have given.
- **More than one language:**
Users who use more than two languages like English and Spanish can create some inconsistency problems like uploading duplicating data or getting confused over what language to use. They may also give information in both language at the same form which creates problems in sorting the data.
- **Proper interest or motivation:**
Users need to feel appreciated as they will provide the data about the volcano voluntarily. So they need to be interested in using the application like uploading pictures and getting recognition of their efforts.

6. Illustrate the critical usability concerns with a short story

Suppose, John Doe is a tour guide who is visiting the volcano and going to use the application. He is very excited about this new application. So he is filling up lots of forms in the application and uploading lots of pictures. But most of his data are duplicated information and meaningless. After some time, he faces a problem filling out the form. As he is using the app in his smartphone, he finds the upload picture button unresponsive. After some trial and errors, he finds out the button for uploading photo needs very precise touch at specific location. Otherwise the button does not work. He becomes frustrated and regards the application as inefficient for his small smartphone display. He loses his initial motivation to provide information about the volcano as he does not how his posts are going to help others. He stops using the application.