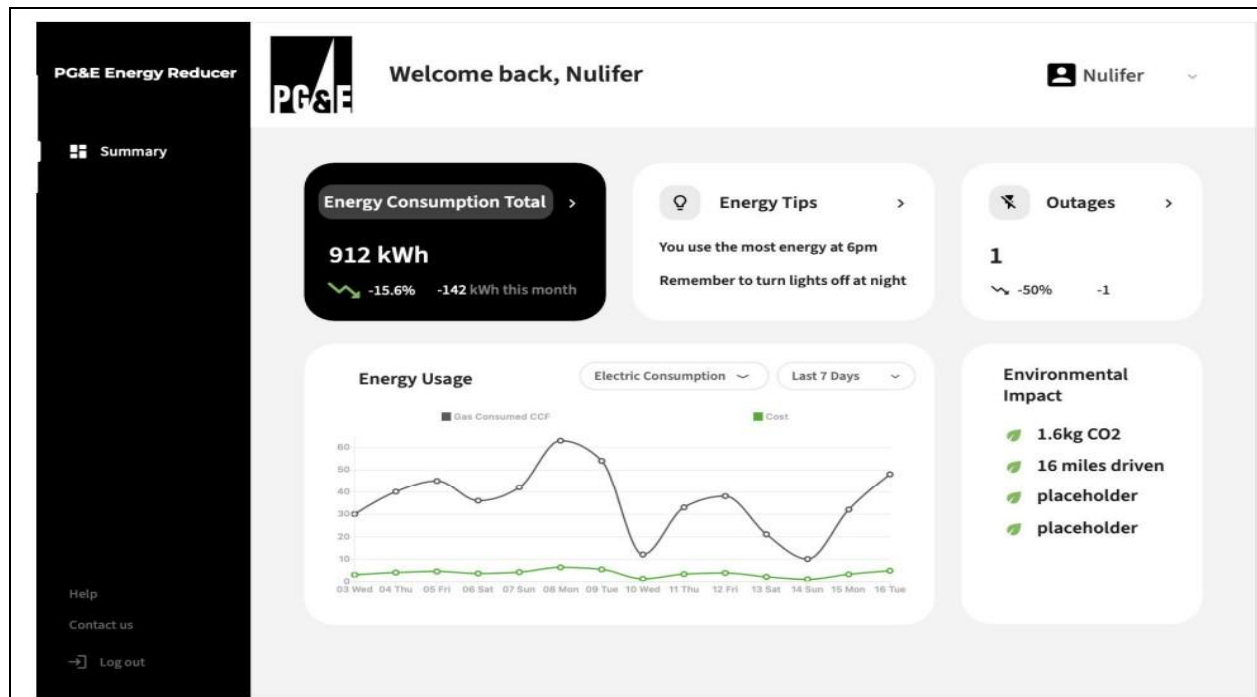# Heuristic Evaluation -Soham Sheth

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Team 3 : NRGR – App: PG&E Reducer

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Team PG&E Reducer :

(AppDeveloper) Team Members	UX Consultant	Scientist
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Project Design :

The PG&E Energy Reducer app is a web application for PG&E customers that will allow them to visualize their heat and electric consumption through easily readable and understandable graphical representations. The app also shows trends and recurring energy spikes and gives the customer advice to help reduce their energy consumption as well as their energy costs.

UI Design:

It is a single page web application designed by the developers team. Nowadays lengthy pages applications can be boring, lethargic to scroll through and surfing from one page to another can turn out that the user is not able to focus on the important and most useful content. Therefore it was a good idea to focus on a single page application, where you show all the important information on a single page and it's easy to understand for the user and the user doesn't need to keep surfing on the internet.

Initials the design will be as follows:

 1)There will be an easy login with the credentials provided by the PG&E company to their users.

2) Then there will be a user interface page where the page will have a title like Energy and cost usage graph, where users can select the graph according to day, week and month.

3) There will be few other titles designed and denoted to particular topics as follows,

   a)Total Energy Consumption

   b)Energy Tips (where there will be some energy tips related to his previous data, where the user can save energy consumption.)

   c)Outages

d)Environmental Impact (It will show what other things you would have done from the energy which you have used or consumed.

4)There will be a few more buttons for help, contact us, summary(which is the home page) and log out which will direct the user to different pages.

Heuristic Usability Principles:

(According to the Nielsen's Heuristics and Ambient Heuristics, the following are the Usability Principles)

Match Between System and real-world:
The application's user interface (UI) is relatively straightforward, user-friendly, and hides from the user the specifics of how it operates. The app's information is written in Standard English and has graphical representation making it simple for users to read.

Aesthetics and Pleasing Design:
The layout and design page follows a regular pattern, which makes it straightforward and consistent. Therefore only relevant information is provided.

Sufficient Information Design:
The app does not contain any extraneous stuff and has just enough information to be readily understood and used.

Visibility of the system status:
Appropriate feedback is provided within reasonable time about the user's act, once the user clicks on the data they want to view it gets easily navigated and results are also obtained accurately.

User Control and freedom:
Being a single page application, there is not much control in the user's hand which can be good in terms of control. The control in users hand is for selection of time(days, month, week) So if the user wants to select week and by mistake he selects month he can reselect week. So that easy.Therefore, there ways for users to escape from a mistake

Flexibility and Efficiency of use:
The web app has a simple user interface and is majorly used on desktops. On a single click users can have different graphical representations in the form of days, weeks or months on a single page without surfing to and fro.

Consistency and standards:
Common design patterns and easily relatable contents are used throughout the application. Therefore, new users should have no trouble using the app as intended.

Help and documentation:
As discussed in class instead of redirecting to another page after clicking on help page after clicking on the button the user may be directed to a tutorial (video/documentation) that walks them through the application's fundamental use cases by clicking this button

Usability Problems of Current Design:

1.   There is no sign up button on the login page. This violates the Consistency and Standards principle.
2.   There is no popup or notification which prevents the user from performing an unintentional action. This violates the Error Prevention Principle.
3.   The homepage lacks any option to access settings. Settings can provide useful controls to users. This violates the User Control and Freedom principle.
4.   There is no documentation that's readily available for the users to refer to. This violates the Help and documentation principle.
5.   "Outage" title/ column is not clear, the space can be used for Outage can be used for some informative contents.

Critical Usability Concerns:

1.   What if the user is having many housing/commercial properties, adding more residential housing options from the same login credentials is useful.
2.   Lack of a button for downloading a csv file can add up a huge difference. There should be a button for downloading information using a csv file.
3.   Lack of adding comparison lines in graphical representation.

Critical Usability Concern Scenario:

1.   Ricky is having multiple houses.

Here we see that Ricky is having multiple 3 houses and 2 industries. He is willing to access the application, so now if he wants to access and see all the content only once he logs in there should be some dropdown button for selecting his housing and industrial number. So that he doesn't have to login 5 different times to see the data.

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2.   John is complaining and he wants to contact the PG&E but now he is not getting the option to download his previous data in graphical format.

John is having a complaint regarding the data displayed on the application and he is willing to complain to the company regarding the same but now he has to click photos from his phone or take the screenshots of the graphical representation as he is not able to download the data.
Giving an option to download a csv file can make a huge difference and can be useful.

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3.   Mike is not able to compare his previous month's usage and current month usage.

Mike is willing to compare his usage using graphical representation but he has to keep surfing back and forth continuously on the application. If Mike gets a comparison based on graphical representation, comparing previous energy used on the same date of the previous month will be helpful. So adding a button of comparison and drop down options will make a huge impact on application.