Teaching the World About the World

Our first project concept as a group was to create an interesting website where people of all ages could learn about the work of the Earth Observation System(EOS). when we were looking for resources to create a webpage about NASA's efforts in Earth observation we saw that all of the websites that were developed by EOS to provide information about their missions and programs were out of date. All of them lacked engagement and were neither participatory nor dynamic, despite being a fantastic resource. We changed our course to focus on finding a means to update "https://eospso.nasa.gov/content/all-missions " Since the EOS all missions page was the most informative of all. Because it would be a waste of time and resources to create another website when we could improve the one we already have. As a project, we decided to develop guidelines for the site's designers to refine their work so that users from all backgrounds can enjoy themselves while learning.

Although there are many flaws, color and theme seem to stand out the most, but they are also the easiest to fix. To begin with, there is no specific color palette for all the pages of the website, not even for the home page, making it difficult for the reader to focus on the contents. As a solution, designers can follow NASA's website creation manual "https://nasa.github.io/nasawds-site/components/colors/" or simply create their own color palette and use it throughout the website. The website has some issues with the organization in terms of simplicity. On each page, there are pop-up-like components that disrupt the order of color, which we know has a negative impact on UX (user experience). Additionally, the resolution of the satellite images is so low that it gives the website a generally outdated appearance. With these two elements combined pages are confusing to look at. In order to that problem, the website might use the parallax or infinite scrolling technique to display their work. These small adjustments might enhance the website's visual appearance.

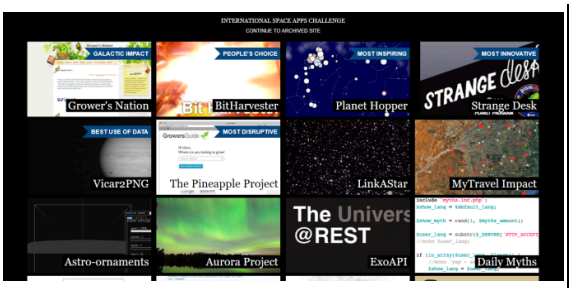
Another significant issue we need to address is the typography on the website. Reading from a small font may take longer, which makes it easier to get bored. Just like the font size, font type also affects the reading speed. Even though Arial is one of the best fonts out there for information retrieval and is being used in the website for it. however, the font size is too small to read for an extended period of time. There are too many segments with too much writing on them, making it

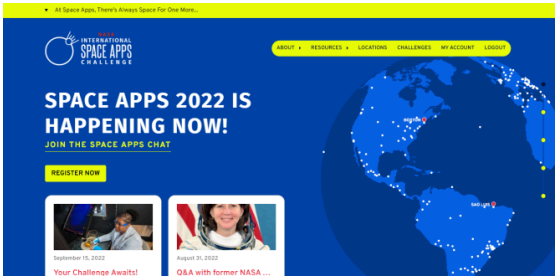
difficult for the user to understand what is important. A solution would be to reduce the number of components on each page so that there are only a few focus points for the reader to look at.

Even though color and font are significant issues that negatively affect UX, they are dwarfed by the impact that a poor user interface (UI) has on UX, which can be corrected with some fundamental improvements. To begin with, the website provides little to no interactive experience or movement to encourage people to learn by engaging them. While the website provides a timeline of significant satellite operations, It is not enough of an activity to amuse the readers' curiosity which would eventually make them spend more time learning about the things they have engaged with. A timeline is an excellent method to grab the reader's interest early on in the learning process. It was added to the EOS website, but it can be improved. And also timeline can be prioritized and added at the top of the home page to attract potential readers to learn. Besides the timeline EOS can also use another of their open source applications where you can observe their satellites and where they are via https://eyes.nasa.gov/apps/earth/#/. Aside from the immersive experiences that the website can provide, there are some changes that must be made. A search bar can be seen in the upper right corner of the first image. Even though it appears to be functional, it directs you to other websites which have similar content rather than conducting an internal search. A search bar is an excellent way to improve the UI of large libraries, such as this one. As was mentioned in the previous paragraph, excessive content may divert attention and make it more difficult to access the information. Additionally, the website's top bar contains links that cannot be reached. NASA can add the desired content to the EOS website instead of the website's links. With these changes made the website's UI can improve drastically.

Other areas could use some improvement as well. Some of them are the design of the navigation bar, buttons, the background, and the order of the missions page. The website's navigation bar appears to have been designed for the needs of the early internet. Now we need a simpler navigation bar and buttons that provide the same information in a more straightforward manner while consuming less attention and space. As for the background, a specific type must be used consistently throughout the entire website to create a sense of continuity. Even though the picture doesn't have any filler gaps, the original website is almost entirely made up of grey background gaps which can be used to upper-scale the writings on the information to make reading easier for users. These changes have a significant impact on the UX even though they appear to be unimportant.

A website's quality and user experience can benefit from the adjustments outlined above. We can use two examples to demonstrate their significance. Look at the websites below to see how the NASA Space Apps Challenge's website has changed over the years. Compare them and see if the modifications align to what we mentioned earlier.





Links:

International Space Apps Challenge for 2012 version(one on the left)
https://www.spaceappschallenge.org/ for 2022 version(one on the right)

In conclusion, the guidelines we developed are intended to raise the UI and UX quality. The project would significantly increase the number of users on the EOS website, helping NASA achieve its objective of informing a greater population about its Earth observation projects.