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A6 - Informational Website

Live Site Link: https://rmorbia.github.io/pui-final
Source files can be found on Github, rmorbia/pui/Final Project

Description
This website takes information from the Wikipedia page for “Human Mission to Mars” and use interactive elements like scroll animations to make the content pop. I also incorporated some information and visual assets from NASA. The information displayed includes some of the challenges with sending people to Mars as well as the most recent proposal. Through scrolling, elements appear with animation of opacity and/or position. Larger backgrounds are animated in such a way that fits within the context of the image, such as a planet getting larger as it moves closer or a rocket flying off.

The target audience is anyone who would like to know more about NASA’s mission to Mars. More specifically, this could be integrated into Wikipedia’s page for this subject, for anyone who visits it to see. It mainly presents the information in a more digestible format.

This site is built to be responsive and can work on any device from mobile to desktop.

Animations
The main form of integration is animations, for which I used Skrollr, jQuery animate, and css. For simpler animations like the arrow on the homepage appearing/disappearing and sliding down, I used css animations because it was well-suited for that and was easy to implement. For animating the scroll when clicking on a navigation link. I used jQuery animate because it was capable of doing so and allowed me to control the speed by taking the difference between the current vertical scroll position and the endpoint of the scroll.

For more complex animations, I used Skrollr as recommended in the lab. This worked well for parallax scrolling and for altering elements on scroll; however, I ran into a big issue, which I describe below with the other challenges.

Changes from A5
Changes were fairly minor, some spacing and sizing were tweaked to fit the viewport size. One slightly bigger, visual change I made was to the title and image for “Technological Challenges”. The title visually took up too much space in the navigation compared to the other links, so I shortened to give it a more circular shape. I also changed the image for this title section as the original image in A5 was rough and not pleasing on the eyes. In the navigation, I created a radial design on desktop, a tray of links on tablet, and changed the hamburger menu on mobile slightly to resemble a Material Design action button hovering over the page.

I also changed the name of the nav link “Home” to “Back to Top” which makes more sense for a one-page layout. Additionally, the text over the Mars vehicle was changed to be centered.

Challenges
I had some minor issues with Bootstrap where the columns did not work properly; I found that I just had to structure the content using containers, then rows, and then columns. One issue that I could not resolve is that Bootstrap’s class “hidden-[size]-up” did not work so I had to write the hidden class for every size individually. This was not something that interfered with any of my code so I am not sure why it did not work.

My biggest issue was with Skrollr; as far as I understand from researching online (there is not much documentation, only forums and tutorials from others online), it seems that animations can only be defined once. This is specifically a problem when the content layout changes (e.g. from 2 columns on desktop to 1 column on mobile) as the positions do not line up. For this I had to use JS to replace the data- attributes in html for each screen size.

Using JS to insert Skrollr code did not work initially until I figured out that I had to place the Skrollr initialization code after the code that changes the html.

Note: You may have to refresh the page after changing the screen size to see the proper Skrollr animations. Also Skrollr does not seem to play well with Chrome’s device toolbar, so please physically resize the whole Chrome window to see different screen sizes.

Skrollr also adds extraneous whitespace to the end of the page for some reason. I found a fix using “forceHeight: false” but using this breaks all the Skrollr interactions. Eventually, I found that what Skrollr was doing was defining a literal height as an attribute in body. So I overrode that attribute and set height to auto, but it still broke Skrollr’s functionality; I then realized this new problem occurred because I changed the body height before Skrollr initialized. After moving this code below the initialization, it worked!! Again if you resize the window, you may need to refresh the page to fix whitespace issue at the bottom.