PUI Final Report
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Section D

Deployed link: https://vaidehi-chotai.github.io/pui-hw/final-project/home.html
Responsive: The website is responsive across screens of all sizes. You can test it with the following sizes during grading – iPhone 12 Pro (390px width) and a laptop screen (1440px width).
Accessibility: See appendix

Part 1:
My website is dedicated to providing information about the diverse firefly species found in the United States, including details on their unique behaviors, flash patterns, and where users can sight them and what they can do to conserve them. Through this content, I aim to kindle a sense of wonder and appreciation for these remarkable but often overlooked insects, fostering a deeper connection that I hope will motivate individuals to actively participate in conservation efforts. In order to engage my users and evoke a sense of wonder and fascination in them, I have incorporated large, captivating header images/a carousel on the webpages. These images aim to immerse the users into the firefly watching experience, illustrating the inherent beauty and magical presence these insects bring to our world. I have also added a poem on the homepage to add to this romanticism. Additionally, I have made the website interesting by adding an interactive map which users can use to see where they find the most spectacular firefly displays in the US. The dark theme of my map and location markers that look like firefly flashes further make the website more interesting. I have also included images inside all the information cards, along with collapsible accordion elements and CSS transitions that make the cards scale up on hover, to add dynamism to the website. The conservation page has an animated counter, a video and illustrations to make the page engaging and dynamic. The counter not only adds motion to the page, it also emphasizes the dire need for firefly conservation efforts. The target audience for my website are people who live in the US. Specifically, it should speak to curious people who are interested in biodiversity and conservation, or who enjoy taking trips to national parks and want to go firefly watching.

Part 2:
- **Nav-bar**: The user can click on the logo or 'Home' to get to the home page. They can click on 'Map' to directly go to the interactive map on the home-page. They can click on the 'Locations' dropdown to get a list of firefly sighting locations; clicking on each dropdown item takes them to a separate webpage with information about firefly species found at the location. And finally, they can click on 'Conservation' to go to the webpage where they can find information on how users can help to protect fireflies.
- **Carousel** on the home page**:** Clicking on the previous and next buttons on the carousel takes the user to the previous/next header image in the carousel sequence.
- **Interactive map** on the home page: Users can pan, zoom in and zoom out to go to different parts of the map. They can click on each of the green location markers, which map different firefly sighting locations. Clicking on the markers will display a pop-up with the name and state of the sighting location, which can further be clicked to get to the specific location page. The same links are also listed on the right of the map for better accessibility. Clicking on these links also takes the users to the specific location pages.

- **Firefly cards** on each of the sighting location pages: Every sighting location page has information cards for each of the firefly species found at that location. Hovering on the cards make them scale up and clicking on the white region below each card opens up the accordion element, which has more information about the firefly species. Once expanded, the user can click on the white region again to collapse the accordion and hide the extra information.
- **Counter** on the Conservation page: The counter is not interactive, however it fires up every time the page is refreshed/reloaded. Users should refresh the page to see the counter count up to 44.
- **Video** on Conservation page: Click on the red play button to play the YouTube video.
- **Conservation Tip cards** on Conservation page: Hovering over the card scales them up and adds some dynamic movement.

Part 3:

- **Name of tool:**
  Leaflet Javascript library
- **Why you chose to use it?** (2-4 sentences max)
  I chose the leaflet library because it allowed me to add an interactive map to my website in an easy way. Leaflet provided a ton of tutorials and instructions on its website, which helped me quickly learn how to use it. It is also lightweight and the maps are responsive, so my map loads quickly and cleanly on all screen sizes and devices. Finally, it allowed me to add location markers too.
- **How you used it?** (2-4 sentences max)
  I incorporated Leaflet by directly adding its CSS and JavaScript files in the HTML head. Using the Leaflet library, I created an interactive map centered on the U.S. with a specified zoom level. I then added a dark-mode tile layer by including a MapTiler template URL to my JS file. After this, I determined the lat-long of the different locations and added green markers with pop-up links to the map object using addTo() & bindPopup() methods provided by Leaflet.
- **What does it add to your website?** (2-4 sentences max)
  Leaflet adds an interactive and visually appealing map to my website. It allows users to see the geographic distribution of fireflies and also makes the website more engaging and interactive. Users can zoom in and out and pan to move and play around with the map, and they can click on the location markers to learn more about the fireflies found in a particular location.

Part 4:

I did not really make any design changes to my website; I retained most of the original design, however I made some minor changes to my website, mostly to make it more accessible and feasible. First, I reduced the scope of the website by reducing the number of firefly sighting locations I included on the map and in the website. Second, I added a list of locations next to the map to make it easier for users who use keyboard tabs to navigate. Third, instead of having page headings on top of the header images, I put them in div's with dark backgrounds above the header image to increase contrast and enhance readability for visually impaired users. Finally, I turned the conservation tips from lists into cards with information and colorful illustrations to make the page more informative and engaging.

Part 5:

Understanding Bootstrap code and integrating Bootstrap elements into my website took me the longest time and was challenging at the beginning because I was using it for the first time and I found it difficult

and confusing to customize the Bootstrap components because there are so many classes attached to each component. I also found it difficult to make some parts of the website, in which I used CSS and flexbox, responsive across different screens. I originally wanted to add firefly flash animation on my pages and I tried to do so but found it very challenging to get the magical blur effect of the flashes right, so I did not end up adding that to my website. Finally, I found it challenging to plan and execute this entire website – in the past, each step was broken down for us, but for this project I had to plan every section and component on my own and I had to read manuals, understand third-party code etc. to bring my vision to life and to turn my Figma mockups into a dynamic website.