Riva Fouzdar (rvf)
PUI Assignment 7

Site Link: https://rivafouzdar.github.io/

Part 1

The purpose of my site is to create an informational tool that teaches users about smart home technology and how it has changed over time. I've always been fascinated by technology rapidly integrating itself into our everyday lives, and seeing automated tech becoming a part of our living spaces seems to be in the most invasive advancement in technology. The tool I created is intended to inform users about the history of smart home technology and the different forms in which it can exist in present-day and in the future. I chose to address different types of technology including voice-activated speakers, smart light bulbs, smart thermostats, robotic vacuums, and augmented home security systems. I attempted to make the site interactive and engaging by giving users the option to explore the inside of a real smart home, with an affordance to click on different technologies and learn more about their origin and significance. Users can also scroll through the timeline and see how smart homes have been portrayed in media throughout the ages. The target audience is intended to be individuals who are interested in smart home technology and the impact it has had throughout the generations. Smart home technology has had an impact on architecture, design, and even social media and entertainment.

Part 2

- Interactive Home
    - Tooltips
        - The user would hover over the red circles located underneath each smart technology and a tooltip will appear with the name of the device.
    - Modals
        - The user would click on the red circle and a modal will appear with more information about the device, including its function within the smart home.
        - The user would click on the X in the top right corner of the modal to exit.
- Interactive Timeline
    - Scrolling
        - The user would scroll down to reveal different smart homes in different time eras. Through the use of animation, the different eras appear as you scroll down.
    - Embedded YouTube links

        - The user would click on the different YouTube videos embedded within each textbox in order to learn more about that era of smart home technology.

Part 3

- d3 library
    - I chose to use the d3 library after we learned how to use it in lab a few weeks ago. I liked how the tooltips showed upon mouseover and I thought it would be a unique way to show information when a user hovers over specific devices around the home.
    - I used d3 to create the red SVG circles below each device. I also used it to create the tooltips upon mouseover and also to allow the user to view a modal when they click the red SVG circles. I also used it to animate the modals when they appeared.
    - It allows the user to interact with devices within the home in a logical and clear manner. The red circles have a clear affordance and once a user hovers over them, they will then be able to click on the dot to receive more information.

- Web API + Animations, Javascript plugin → https://www.jqueryscript.net/time-clock/Horizontal-Vertical-Timeline-Plugin-jQuery.html
    - I chose to use this library when Franceska suggested that I look around for plugins for interactive timelines. I chose this specific one because it had animations and had each element of the timeline appear gradually upon scrolling.
    - I first downloaded the files for the plugin and added them to my working folder. I was then able to call some of the functions that the plugin included in order to create a working timeline. After that, I personalized each element of the timeline to include information and embedded YouTube links to videos.
    - It adds an element of interactivity to my site because users are now able to scrolls through the different eras of smart home technology and end with the modern-day impact.

Part 4

Link to InVision: https://invis.io/K7GM23VXJ24

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I iterated on my HW6 mockups by choosing not to include different devices within each category and instead focusing on the industry leaders. For example, in my mockups I chose to do a comparison of different home speakers, but in my actual site I just focused solely on the Amazon Echo, because of its growing prominence within the industry. My timeline remained pretty much the same. My interactive home page looks similar to the mockup except the tooltips appear on mouseover instead of always being there. I wanted to choose the different technologies that would appear in the smart home, so I decided to find a picture of the inside of a living room and photoshop the devices into the locations that I wanted.

Part 5

I had a couple challenges throughout the duration of this project. I struggled with finding the right API to use for my timeline, because so many different ones exist, and I wanted to make sure I found one that was easy to understand and implement but also had an interesting front-end design. Once I found the right timeline API to use, I wanted to add more animations and make the current timeline circle appear as a different color and change upon scrolling. However, once I opened up the JS file that was downloaded from the plugin, I realized that all of the code was written in one very long line and was impossible to understand, so unfortunately I was unable to make sense of it enough to implement the additions that I wanted to.

For the Interactive Home, I really struggled with the d3 red SVG circles and making sure that the tooltips had the right text appear upon mouseover. After I got that part working, I had to learn how to make different modals appear upon mouseclick of each circle. I also really struggled with making my Interactive Home responsive. The location of the SVG circles had to be set so that they lined up exactly with the devices that I photoshopped into the picture of the home. This made it a bit difficult to get my circles to be responsive and maintain the same location that they had on the home image when the browser changed dimensions.

As I mentioned on Piazza, there were a couple errors that I was unable to get rid of during the course of this project. I've included them below.

- "Uncaught ReferenceError: d3 is not defined"
    - I attempted to load the src files and none of the different methods I found on stackoverflow would work for me. This error is occurring on line 5 of my main.js file within my Interactive Home folder.
- "GET https://googleads.g.doubleclick.net/pagead/id net::ERR_BLOCKED_BY_CLIENT"

    - This error can be found on my Interactive Timeline page however it only occurs if you have an AdBlocker installed. When I loaded the page in Incognito mode, the errrors disappeared.
- "Error parsing header X-XSS-Protection: 1; mode=block; report=<URL>: insecure reporting URL for secure page at character position 22. The default protections will be applied."
    - Sometimes this error appears, however when I googled it the following post (https://stackoverflow.com/questions/48714879/error-parsing-header-x-xss-protection-google-chrome) showed up, explaining that this is a common problem with Chrome developers and that there is no action that we as end users can take to resolve this.

Sources used:

- https://www.the-ambient.com/features/visions-through-the-ages-history-of-home-automation-178