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Week 1 Assignment

Website Proposal

Objective: To redesign the website <http://floridaenergy.ufl.edu/>, so that it is responsive, easy to use, and easy to understand.

Current State

- **Accessibility Audit**

- [ACHECKER](#)
 - FESC website received 238 potential problems, and 45 known problems.
 - FESC also failed to pass both of the HTML and CSS validator tests.
 - The guideline tested was: WCAG3.
 - I used the same above website to test for guideline: SECTION 508, and I also received a result message of 'Fail'.
- [Accessibility Valet](#)
 - FESC received a 'Fail' result.
 - The guidelines tested were: WCAG3.
 - FESC also received a 'Fail' result for the guideline [SECTION 508](#).
- [WAVE](#)
 - This was by far my favorite tool to use. It gives us a summary of the errors on the left-hand side and shows the FESC website on the larger right side of the screen including icons positioned on the location of the errors.
 - There's also information provided on how to fix the errors. One common error I found on this page, was that <images> were missing their <alt> tag. I also like that the 'Information' tab of this site includes a 'Why It Matters' section with a quick note highlighting the importance of fixing the named error, and a 'How to Fix It' note, which guides us on of course how to fix our error.

- **Mobile Friendliness**

- My Personal Device: iPhone 7 Plus
 - This website isn't mobile-friendly. I typed FESC's site address on my smartphone, but the site didn't load, therefore I wasn't able to view the website on my phone.
- [Google's Mobile Friendly Test](#)
 - I received comments such as: "*elements are too close together*", "*text is too small to read*", and "*content wider than screen*".
 - The site had 3- page resources that couldn't load, with two of them being a CSS stylesheet, and the other the JS script page!
- Responsive Design Checker
 - [iPhone6 Plus 414 X 736](#).
 - The results are terrible. The site is not mobile friendly at all.

- The footer is huge on this device, it takes up the whole screen in a horizontal format and doesn't give the 12 footer icons a good appearance.
 - We must do significant scrolling to the right in order to see the entire homepage.
 - The bottom right corner is nothing but white space, there is zero content on this corner of the site.
- [Apple iPad Mini 768 X 1024](#)
 - Results are still not great.
 - Must scroll horizontally to view the entire website.
 - There is still a lot of white space to the right of the blue footer.
 - The home page text is small.
 - There's still a significant amount of empty space to the right side of the blue footer.
- **Performance**
 - [PageSpeed Insights – Google Developers](#)
 - The gave FESC an optimization score of 'Medium 62/100'.
 - The 'Speed' score was 'unavailable'
 - FESC has '*5 blocking script resources and 7 blocking CSS resources*' which delay the rendering time.
 - It's recommended to set an expiration date in the HTTP headers for 'static resources' so the browser loads from the local disk instead over the network.
 - Another recommendation is to compress images to save bytes of data.
 - Two interesting suggestions that I saw was to 'minify' both CSS & JS. I did a google search on the meaning for this, and it basically means to remove unnecessary code without changing the functionality of the project, meaning there's code on the site that we can do without. By minifying the CSS we can save 1KiB with a 29% reduction; with JS, we can save 646B, a 30% reduction.
 - [WebPage Test](#)
 - According this site, the total time it takes for the website to load is 5.732s and takes up 1,254 KB.
 - The images take up about 55% of the content.
 - The website received an "F" for First Byte Time (back-end processing), with a score of 37/100.
 - The website received a "C" for Compress Images, with a score of 76/100. There is an additional note: 535.5KB total in images, target size = 406.7KB – potential savings 128.7KB.
 - 'X' rating for 'Effective use of CDN' with a score of 22/100.
 - 'Cache static content 10/100' (this seems to me the most commonly low rated on these performance tests).
 - [GTmetrix](#)
 - This is probably one of my favorite performance testing tools to use. It does a great job of providing an explanation for its recommendations.
 - Page speed score = 66%
 - There were four notable recommendations which were graded an 'F'.
 - 'Leverage browser caching'
 - 'Defer parsing of JS'
 - 'Optimize images'

- 'Serve scaled images'
- **Functionality**
 - The 'Download Brochure' on the home page doesn't work. I got the following error "HTTP Error 404. The requested resource is not found."
 - The 'Sign Up for Newsletter' on the homepage doesn't work.
 - The last post made in Twitter and Facebook was in March 2016, it appears that they don't update either one. I would take off both of these icons.
 - The LinkedIn icon is just a picture, not an actual link to FESC's LinkedIn profile.
 - All the footer icons do work!
 - The top message of 'Florida Energy Summit' is outdated from 2017.
 - The footer text "*Copyright © 2008-2015*" leads me to believe that the website stopped being updated three years ago in 2015.
- **Ease of Use**
 - In general this website is not easy to use, it's convoluted and hard to understand.
 - The 'Contact Us' tab is ugly and can use a lot of rearrangement on the formatting. <http://floridaenergy.ufl.edu/contact-us/>
 - The 'Advisory Board' tab has an overwhelming amount of text next to the listed staff. This should have a limited number of characters.

User Research – Expected Users

- Adults and students looking for jobs
- Highschool students looking for schools with solar energy-based programs.
- Florida citizens who are looking for information on their states solar energy progress
- Students doing research on solar energy, climate change, and the like.
- The students using this website will probably use their mobile phones to browse the site at first and will be visiting the site when 'on-the-go'. Such as in between classes or during a bus ride to school.

Device Support Necessary

- Based on my list of expected users, this site has to be made compatible with the latest devices. By the name, this website is generating traffic from college campuses where students mainly use their mobile devices to access the internet.
 - This article noted that more Americans are now using '[smartphones as their primary means of internet access at home](#)' and younger adults are more reliant on smartphones than older Americans, with 18 – 29 years of age being the most dependent.
 - [2/3 of Americans are now smartphone owners.](#)

Recommendations

- **Accessibility**
 - I'd review both the HTML and CSS errors and work through those problems until FESC passes both tests.
 - I'd use the <http://wave.webaim.org/> website to help me detect the 'errors' on the FESC site and work through them as much as I could until the error items are decreased.
- **Mobile Friendliness**

- Add flex box to the header and the navigation bar sections so that these sections are responsive on a mobile device. Or we can use Media Queries to change the size of the header and navigation bar when the site is pulled up on a non-desktop sized screen.
- Since the footer is huge on a mobile device, I'd remove the icons for the 12 schools posted. I don't think it's that important to keep around on a small screen since there is little space, and the icons take up too much space.
- Make the footer take up the whole row, instead of just the bottom left side of the page. This will improve the website's look and will replace the white space located to the right of the footer.
- I think the YouTube video should take up the whole screen when it is played on a mobile device. And of course we should make sure that it turns horizontally when the device is flipped on its side.
- **Performance:**
 - Add different sized images so that it helps with loading time and so images don't take up too much of the space for this site.
 - Use this [Google Developers tools](#) for guidance.
 - Use this tool to compress images [TinyPNG](#)
 - I'd review the code using the 'Inspect' tools to determine what chunks of code we don't need and delete that in order to make the code less junky and only keep the code that is being rendered.
 - Use this link from [Developer Tools](#) for help with resources.
 - Minify [CSS](#) & Minify [JS](#)
 - Add an expiration date to the recommended HTTP headers, so the browser loads previously downloaded resources from the local drive instead of from the network.
 - [Use this tool for help.](#)
- **Functionality**
 - Remove the 'Download Brochure' option from the home page because it doesn't work.
 - Make the YouTube video on the homepage auto-play when the page first loads.
 - Remove the 'Sign up for Newsletter' on the homepage because it doesn't work. This probably means that there isn't a newsletter ready to be sent out, therefore the button is pointless.
 - FESC doesn't seem to update neither of their Facebook account nor their Twitter account, therefore I'd take these off of their website. No need to drive traffic to either one of those sites since they probably won't be updated in a while.
 - Since the LinkedIn 'icon' is actually a picture, and not a direct link to the LinkedIn profile, it is better off removed.
 - The top message of 'Florida Energy Summit' should probably be taken out since it is outdated from 2017. The event is in the past and shouldn't have to be announced anymore.
- **Ease of Use**
 - The gradient colors behind the pictures of the homepage are just ugly, and are better off removed.
 - Use a background color for the left tabs. the left navigation tabs under the Contact Us tab aren't pleasing to look at. The blend in with the rest of the page,

which is all white, including the tabs themselves.

<http://floridaenergy.ufl.edu/contact-us/>. The left margin navigation should also be shortened to what's applicable for the Contact Us tab, since that's the tab we're on. There's way too many tabs on the left side margins.

- The search tab should be placed on the bottom right corner of the header. It shouldn't be the first row of the website.
- Make the YouTube video on the homepage auto-play.
- Remove the chunk of white space surrounding the social media icons.
- Add left and right margins so the website doesn't look so overwhelming with information. And it's easier to look at.
- The Advisory Board should contain descriptions that are short and concise.