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DNID Capstone Writeup

Our dashboard idea stemmed from our own issues navigating Pitt’s existing COVID-19 resources. We found it difficult to find information that we thought was vital, whether it was messily scattered amongst many pages or because it was simply unavailable. Often, we found that since the University’s website needed to be detailed and information heavy to suit the large variation of students attending, it was hard to scan pages to find the information we were looking for. For example, if a student wanted to know if they needed to attend classes when they returned in person, they would need to read to the third paragraph on the websites Flex@Pitt page. This amount of text that needs to be digested to find your answer might be overwhelming and discouraging to students. Our efforts are to streamline this important information so students can stay informed quickly and easily. We were much less motivated to read paragraphs of information just to figure out if we needed to attend classes in person and figured other students would feel similarly. We wanted to display only the most important and constantly changing information on the dashboard.

Any important information which we were unable to show in the dashboard, we addressed in the FAQ page. We thought this page was necessary because no matter how hard we tried, we could not find an existing FAQ page on Pitt’s COVID website. A FAQ page goes a long way to address questions and concerns that may not be explicitly listed in a website, and it is the quickest way to give information to the people on the page.

Before designing the first iteration of our dashboard, we researched the opinions of our peers and found that we appreciated the look of a minimalist, mostly white dashboard. Once that design was implemented, we noticed that it looked out of place compared to the rest of Pitt’s website. We then decided to model the dashboard off of Pitt’s website, specifically the my.pitt.edu page. We chose this page specifically because it is the Pitt website that students see the most often. If they see another website that looks similar to My Pitt, they will immediately associate the two, and understand that this is a Pitt affiliated site. Even though Pitt implemented a dashboard during the semester, it ignores the issue that not every student lives on/around campus, and that even those that do would often frequent other neighborhoods. Only informing students of what is going on in their small sample of the Allegheny County population runs the risk of having students believe that there are less cases around them than there actually are. That is why we thought it was important to include the cases in the county and state; Pitt students do not live in a bubble, and we should not address them as if they do.

After identifying that we wanted to develop a dashboard, we started planning what exactly we wanted to include in it. We identified the main issues/topics we wanted to include in the dashboard, based on questions we and our peers found most important. We then located the websites we would use as a reference and websites we would use as reliable data sources. When we had an idea of our content and a few references to go off of, we sketched a prototype of the dashboard.

Once we were done planning, we split the development into two roles - the design and the content. For the design, we used the standard HTML, CSS, and JavaScript. For the more complicated functions on the website such as the widget containers and the accordion FAQ layout, we implemented Bootstrap components that were tweaked to fit our needs. For the content of our dashboard, we chose to build five widgets that each contain the most important information so our users can view them immediately: (1) Coronavirus cases by state, (2) Coronavirus statistics for Allegheny County, (3) Pitt campus risk posture, (4) Pitt study space status, and (5) Pitt dining hall status. For the first widget, we used Microsoft Bing’s Covid-19 Tracker project to deploy a map of Coronavirus cases by state. The default is set to Pennsylvania, but users can easily move around the map and view information form their desired state. The second widget is a chart of Allegheny County’s Coronavirus statistics embedded directly from Allegheny County Health Department’s website. Rather than attempting to improve upon their well-designed graphic, we chose to display their resource in an easily findable and digestible way on our website.

The third and fourth widgets contain information provided by Pitt that changes very often, so the best way to gather this information was to write a Python script to extract this information from Pitt’s Coronavirus website. As Pitt updates its website with the newest information, our website also stays up to date by extracting this information every time it loads. By using a combination of JavaScript, Jquery, and Python, we accomplished this web-scraping technique for the third and fourth widgets on our page. Unfortunately, we wrote a similar script to gather Pitt dining hall status data, but the start of Winter Break this December meant that all dining locations closed and the website we used for our Python script was taken down. So, at such short notice, we were forced to leave this widget out and reformat our dashboard to display only the first four.

Our final project is a COVID-19 dashboard for Pitt students at the Pittsburgh campus. The main page of the dashboard has widgets that clearly display important information and data. What we did not include in the dashboard, we mentioned in the FAQ page. This page is not only a catch-all for other COVID-related questions students might have, but it also directs students to pages on Pitt’s website where they can find more information if they desire. We hit our goal by providing a streamlined service for Pitt students to receive their Pitt-specific COVID information. All of the important numbers and data can be seen on our dashboard, and all of the important questions have answers that can be found in our FAQ. We collected and organized the information in an easy to read, easy to navigate manner. Our goal was simple but extremely important to us.

Moving forward, it would be beneficial to implement a ‘subscribe’ feature, where students can submit their email and receive a weekly briefing of the information on the dashboard. Another improvement would be a more comprehensive FAQ section. We addressed what we think are the most common questions students have, but there are certainly more niche questions that we were not able to include when creating the page. Expanding on this, creating FAQ sections for each branch campus would make this a more complete and more inclusive page. This includes showing the number of cases in the different campuses on the dashboard page.