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Intro to ITWS

Professor Plotka

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Team 7 Project Writeup:

When we began to brainstorm ideas for our term project, we began to look into apps concentrated in stock trading. As we explored different ventures into this industry, we eventually landed upon what our website is today, Marketfi; a website designed to educate stock users of all levels that don't have time to fully dedicate to trading.

Our original project proposal was to make a web application that would scrape the web for data on a specific market inputted by the user. We started off with a broad idea in hopes that the application could be applied to more than just your everyday stock trading. However, as time went on, we narrowed our market to only stock trading. We wanted the app to use the data from the web in order to notify the user when important information is released, this could include major changes in market prices, or major news on companies. The goal was that the application would do the research for the user and deliver the vital information the user needed.

The targeted users of our application are people interested in investing who don't necessarily have time to stay updated on the industry. The United States stock market is open from 9:30 am to 4:00 pm Monday through Friday, this time block is a period when most people are busy with work, school, or other everyday activities. Because of this time disadvantage, many don't believe that they have the time to invest. Our app is for these users. By delivering the information that they need rather than overwhelming them with market news, users have enough education on their stocks in order to make decisions when it comes to buying and selling.

Additionally, our website has separated our users into two classes; experienced and inexperienced stock traders. By doing this, we allow our app to be used by anyone involved or wanting to be involved in stock trading.

When planning out our project, our team decided to focus on the areas that included pulling data from JSON files and using HTML and CSS for web page design. The creation of the project was split into two essential steps. The first step was creating a functional program that pulled and organized data into what users would see. The second step was creating the actual layout of the information presented to the user, as well as the interactivity of the website itself. More focus was placed on creating a functioning program however we did find it very important to display the information in a readable and easy to understand manner.

While completing the first step of our project, a lot of the developmental process revolved around the API that we chose to use, AlphaVantage. This API allowed for inputs of stocks and companies then outputted the companies information. The information outputs that we used primarily were news articles that the API filtered, and the stock statistics stored in a json file from the API. This was used to display a brief summary of the company as well as a chart displaying the stock's past performance, additionally we used this to create a page of market news articles.

The second step of our project was focused on developing the website itself. In this part we focused on information architecture and website design. When making these decisions we referenced other financial technology companies for inspiration on design. We also used Chat GPT to pick a color scheme and font design for our site. With our design portion, we maintained our focus on the user and that our targeted audience didn't have much time to focus on this, so we made the site quick and easy to navigate as well as veered away from long statements or

portions that would take long periods of time to read. With this, we also used icons and big letters to grab the users attention to where it was needed. Through using charts and tables, this funneled the information into an easy and efficient way for users to read and interpret the information.

While developing this project, our team ran into many challenges. The main challenge was using technology that we were unfamiliar with. Thus far, we had only briefly worked with pulling data, using json files, and making fully interactive sites. Another very large learning curve came with using the API. Learning to use the API came with many steps, first we had to learn how the API worked, then we had to learn how to use it and apply it to our site, and lastly we had to understand what the information it was outputting actually meant. Additionally, there were many CSS grievances as we further developed each page of the site. Lastly, there were many merge conflicts that came with multiple people working on one project. In the past, most of the coding we had done was independent work, so learning how to work and fix code together took a lot of time and communication as a team.

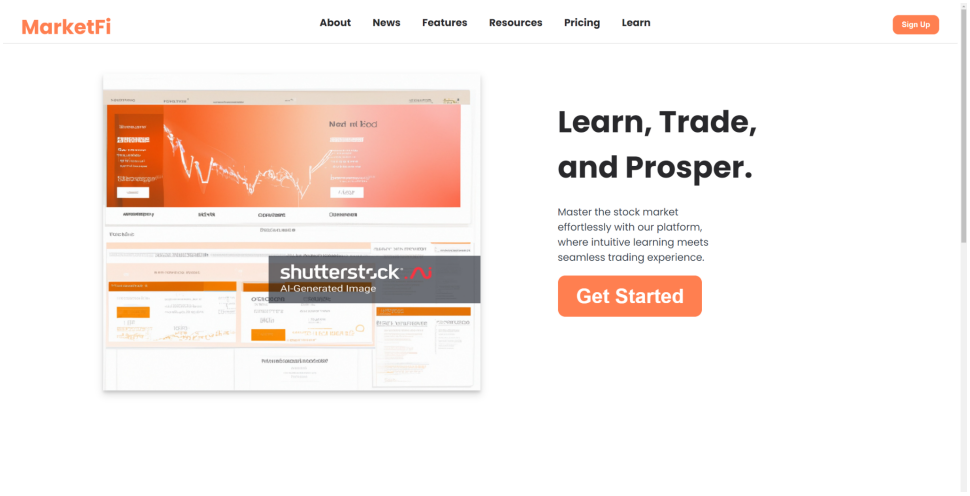
Despite these challenges we were able to make a functioning website. Our site included many functional pages which were our landing page, sign up page, display page, news page, and learn page. Each of our pages included a functioning link to the landing page,a bar which included links to all of the other pages, and a sign up button. The sign up page consisted of the choices between experienced and inexperienced stock traders, which then led to choice of stock, and finally the display page which showed information on the stock. Our news page consisted of a feed of relevant articles concerning the stock market. Lastly our learn page provided users with short basic facts and links to information to learn more about investing. (images of working pages shown in additional materials)

Moving forward with this project, there are many potential changes that we could implement to our site. The next step would be creating a more fleshed out user experience by making more changes to inexperienced vs experienced users site experience and implementing more changes to our features. Another large step would be creating an actual user account database, so users could sign in and out of their accounts and still access the stocks or information they saved from last visiting the site. We would also like to explore using algorithms to apply to making buys and sells on stocks for users to use, rather than having to heavily rely on their educated decisions. Lastly, we would move the data from the json file into a database in order to make it easier to use on backend work, but also for a better display on the front end side of the site.

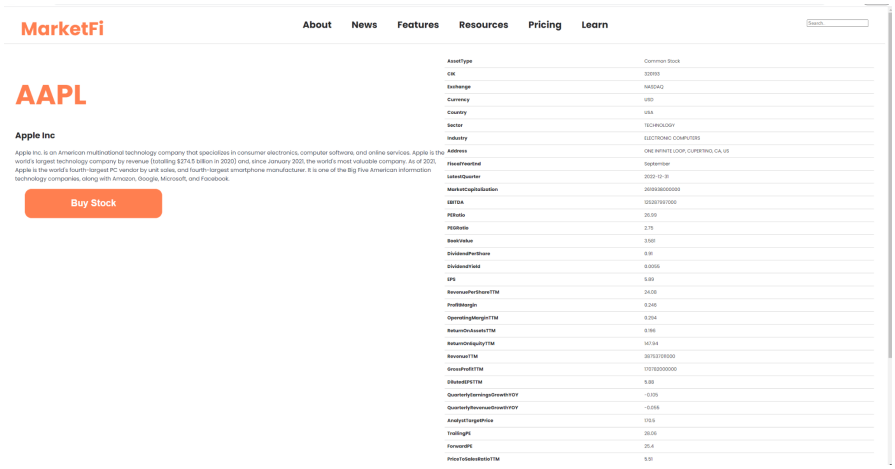
Overall, this project was a very valuable lesson moving forward in ITWS. This project has tied together all of the aspects we have learned throughout our intro class. Creating MarketFi was a great inspiration into working on further personal and professional projects in the future.

Additional Materials:

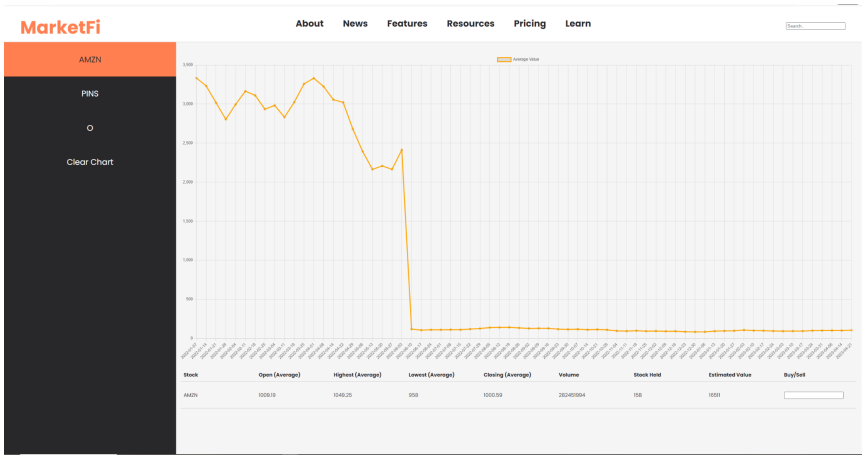
Landing page:



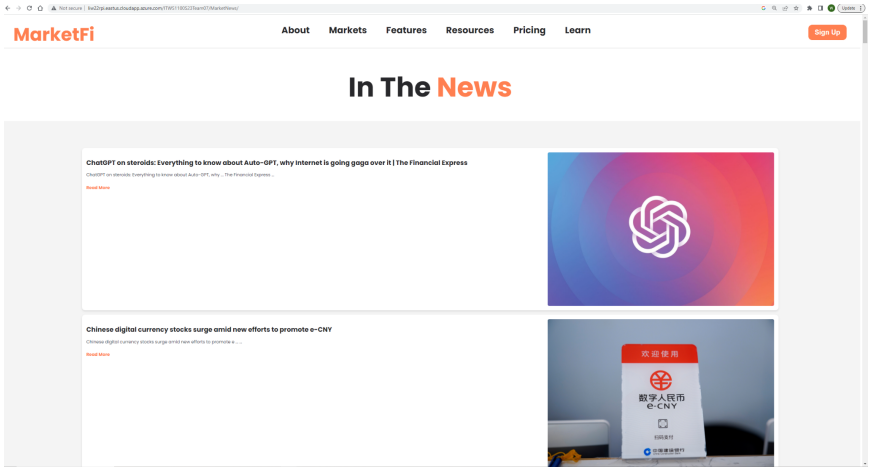
Search page:



Display page:



News Page:



Information Architecture: