Charles Marshall
Noah Waxman
Ethan Rule
Mark Shinozaki
Ben Weber

CPT_S 322 Milestone 1
Team Name: FireMap

Tools

- GitHub
    - GitHub is a great tool for our project because it offers powerful version control software and it also allows for quick, easy collaboration between our teammates. With GitHub, our team members can easily track changes and ensure the website and our progress can be restored if anything goes wrong. Not only is GitHub a great tool for version control, but it is also a large resource of free information about code, which may aid the development process.
- Discord
    - We chose Discord as our prime form of communication because it allows us to seamlessly collaborate with each other, whether that be sending files, sharing the screen, or sharing updates. Moreover, Discord is a great tool for voice channels in case physically meeting is impossible for the team. With these features, it will streamline our project workflow and improve collaboration between the group. Given that each team member has reasonable experience with the application, it made the most sense to choose it.
- Chrome web developer tools
    - Our project specifically focuses on scraping data from websites which make public fire data available to the public. Chrome web developer tools will allow us to analyze the content and structure of the website’s we may decide to scrape. We may not have access to a website’s API so the next best solution is checking the website's page source, which will require Chrome web developer tools. Moreover, the toolset also provides a Javascript terminal which allows us to test our scripts and verify how accurate our code is.
- VSCode
    - Visual Studio Code is an incredible text-based editor that comes with several features to “enhance” the coding experience, such as its intelligent code reading, suggestions, extensions, debugger, etc. It can also utilize git, which makes it easy to track our changes and collaborate with the

team. Additionally, it is a cross platform utility which makes the tool easy to use among each group member.

- GitHub Pages (Or other hosting service)
    - GitHub Pages also makes for a great tool at our disposal because it is a hosting service which allows for direct integration to our project's repository on GitHub. This allows for our team to seamlessly deploy our website in just a few clicks. Additionally, GitHub Pages is a cost-effective resource, seeing as it is a free service. Security is also an important factor when choosing a hosting service, and GitHub pages has strong security features, such as HTTPS encryption which will protect our website and its data. With this service being free and easy to deploy our project, the choice is made easy.
- Figma
    - Figma is a massive collaboration tool which will allow us to work on multiple designs/prototypes for our website's design together. It's a useful application because it has a sleek, easy to use design and has version control features. More importantly, our website will need a proper design and as such, Figma allows us to easily test our designs on various screen sizes, which is useful for cross-platform integration. Overall, Figma provides a flexible and easy to use platform for creating our designs, and it excels in its collaboration features.

Technologies

- React
    - ReactJs is a JavaScript library that excels in creating flexible, expandible and dynamic user interfaces for websites across the internet. With its reusable UI components, it makes designing the website easier and more efficient at maintaining it over time. The most important feature is its ability to load content without reloading the page, which is going to be essential for our interactive map. As mentioned previously, we will need the ability to access APIs or connect to web services and React lets us do this. It's also a popular tool among modern developers, so there is a large public community with valuable information, support and tools that we can use.
- Leaflet
    - Leaflet is an open-source Javascript library used to create interactive website maps using OpenStreetMap. Leaflet will be used to create the main web map functionality of this project. Leaflet will prove useful for this project as it provides a comprehensive suite of interactive map tools, includes extensive documentation, and is provided for free, unlike most other interactive map tools such as ArcGIS.

- HTML
    - Perhaps the most essential technology we need for our website is HTML, as it provides the basic structure we will be using for the web page(s). HTML is the primary building block for all websites and for all devices that can load websites; there is no exception. All web browsers support HTML, which means we can design the website to be cross-platform capable for almost any device. HTML is also a basic low-level language that can be studied rather quickly compared to other higher-level languages; people with limited knowledge in programming can pick up this tool easily. Finally, our team consists of experienced HTML users which will make the project workflow more efficient.
- CSS
    - CSS will be used to create the front end styling of this project. A user-friendly, appealing user interface will be an essential element of this project, meaning that CSS will play an important part in the development process. CSS was selected for its extensive functionality, as well as it being a go-to tool for styling HTML of which our team members have previous experience using.
- Node.js
    - Node.js will both enable us to create a JavaScript runtime environment, and open a library for running and testing our web applications outside the client's browser. Using Node.js enables us to run npm dev like a compiler to display the changes we make to our code on a localhost:3000 server. This will be used to help us simulate our front-end and back-end code without having to make a domain for it. Overall this will enable us to have better productivity, and determine runtime errors, all at a lower cost.

Process Model

- Incremental Model
    - For our project, we chose the incremental process model because it is designed to allow for our project to be made in iterations so that our functionalities are delivered incrementally. The main purpose for choosing this process flow was to help manage the complexities of our project and reduce risk by breaking down the project into smaller parts, which will be divided among our team. Because this process model encourages teamwork by deciding clear requirements and deliverables as well as promotes constructive and continuous feedback throughout the development process, we felt this model was the best fit for our group.