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2) Our group has chosen to work with theme 3.3, the LiveDataLab site, focusing on subtopic 1, developing a more user-friendly interface. We aim to entirely redesign the site, making it much more modern, visually appealing, and straightforward to use.

3) Techniques to improve the UI of LiveDataLab will include investigating a modern Javascript-based web framework such as React. This modern framework allows the reuse of UI components and enables updates to the components based on changes in the data. Some key advantages of using a framework such as React will include

- ☐ Component-based architecture – allows breaking the interface into smaller components that can be reused
- ☐ Virtual Document Object Model (DOM) - this is a modern technique that minimizes how much of the model needs to be manipulated from the actual DOM, which results in a gain in performance.
- ☐ Efficient rendering – optimizes which components need to be rendered

4) To demonstrate the improvement, the team will walk through the user experience side by side with the old LiveDataLab UI and compare and contrast the overall simplicity and the layout of the new design. Key points of focus will be:

- ☐ Modern look and feel
- ☐ Simple interface
- ☐ Item accessibility and navigation
- ☐ Proper feedback and affordances (help users understand the response of the system)
- ☐ Fast loading and response times

5) We would need access to the LiveDataLab Overview Document listed as one of our resources in the CS 410 Project Topics, as well as Aaron Green's MS thesis to further understand the system infrastructure. Given access to an overview and its related documentation, we can further plan out how to approach improving the LiveDataLab interface.

6) We will be using React/Angular for front-end development of the interface and building web applications. Using these tools, we hope to improve the existing LiveDataLab interface, allowing for a more user-friendly interface.

- 7) Given our limited experience working with front-end development, our group will divide our project, giving each member a chance to improve the interface while learning new concepts. We expect that our workload will be distributed equally among the four members, distributing time for research on LiveDataLab available resources, time for research on developing new features/improving the interface, and time for implementing our ideas using front-end development.