Senior Frontend Dev Take-Home Assignment

Consider the following fictional scenario:
Our team is creating a new application that will grow quickly and become quite complex. As such, our team wants to use the same tooling we use for other projects, so we're starting with a boiler-plate application (https://github.com/Bedrock-Ocean-Open-Source/tide-pool).

The first set of features in this fictional application's lifecycle are aimed at allowing its users to browse a list of research ship sonar surveys/cruises that contribute to the GMRT(https://www.gmrt.org/), using the GMRT API (https://www.gmrt.org/services/GmrtCruises.php). Specifically, the product team has requested the following to this end:

- View a comprehensive table of all cruises
- Sort cruises by date in ascending order and descending order
- Filter cruises by ship name, or by entry_id
- Display aggregate total area of all visible cruises (sum of total_area field)

Your job is to create a frontend that implements the features above and any additional functionality that you think would be useful.

The implementation details of this are up to you, but the boiler-plate code might provide some possible avenues that would be consistent with the rest of our frontend.

You may install additional libraries or tools you are comfortable with or think will be helpful. You can use any reference materials and lean on third-party libraries as much as you wish, but the core work should be your own and you should expect to have a discussion with us about implementation strategies and tradeoffs.

Please time-box your work on this to 3 hours. If you run out of time, you may include a description of what else you would have liked to include.

Performance of resource use are non-concerns for this project. We're looking for a balance between simplicity and future scalability. Note this purely a frontend project but you can imagine that in the future we might want to build our own version of this API. In that event, if there's anything you wish the API did that it currently doesn't, feel free to note that.

You'll be evaluated on the correctness of your results, engineering design decisions, state management, coding practices, and organization.