



Frontend Software Engineer Skills Test

GOAL

Design and implement a search bar with a dropdown that can be used to search and autocomplete Clarity Nodes and place them on the map.

INSTRUCTIONS

[Clarity Open Map](#) is a website designed to inform the public about real-time air quality based on readings from Clarity Nodes. Right now, it is focused on the Bay Area. However, as the Clarity Network expand to more cities, it becomes critical for users to locate a site of interest or any Clarity Node by name.

Therefore, we need to enhance the search bar on the top left by allowing the user to search not only the Clarity Nodes, but also places, streets, cities, etc. provided by [MapBox](#). Both Clarity Nodes and places should be populated as the user types. The text that the user types on the search bar filters Clarity Nodes by name and the text should be used to search MapBox for places at the same time. Clicking on one of the results should pan and zoom the map to the target location.

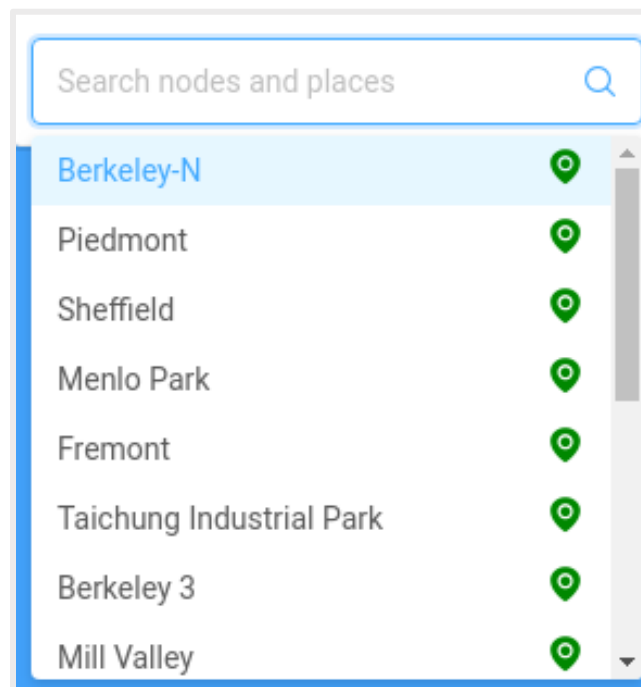


Figure 1. Example design for search and dropdown (Currently it's only showing Clarity Nodes, not places on the map. Please use your own design for list items for places.)



TECHNICAL REQUIREMENTS

- * React.js with Redux. Project should be generated using create-react-app
- * [MapBox](#), via the libraries mapbox-gl and react-map-gl
- * [Ant Design](#) (via the library antd) for components

In addition, you may use any libraries of your choice if it does not conflict with the ones above. You may refer to Clarity Open Map itself and any articles, tutorials, demos, code snippets, etc. but please list all references. Copying code without giving credit will lead to disqualification.

To demonstrate your solution, the search bar component should be placed on a MapBox map and clicking on any result should pan and zoom the map to center on the location. You can get your own free API Key from MapBox.

You may assume the full list of Nodes are pre-fetched and cached as an array on the client side. In other words, filtering the list of nodes does not require any API calls. In this project, there is no need to use an actual list of Clarity Nodes. You may just hard code some names and coordinates and show them as a list in the search bar as well as pins on the map.

DELIVERABLES

We only need a ZIP file that includes your final source code, and a list of sources of any code, examples, or tutorials that you reused. Please be aware that due to Gmail's limitations, you cannot send .js files in a zip file.

You may consider alternatives such as sharing the zip file with Google Drive. You may publish your code on GitHub, but please be aware that your MapBox API Key will be available to the public.

Please e-mail yuchen@clarity.io for any technical questions.