**Summary**

What was particularly challenging?

* ­Working with the Google Maps React package at the beginning. It took some time to find out how to properly render the country and adjust it to the size of the screen.
* Working with Material UI. I always wanted to try it out, but I think it was my last time. Customization is not as simple as it seemed and it is missing components like Dropdowns.

Where do you personally see optimization potential?

* I encountered that the Geocode package often does not return the exact coordinates. Therefore, the country is not always completely centered. I would have tried it next time with the Google Maps API rather than the one for React
* The social share package does not allow you to convert the URL in a hyperlink. Therefore, the user has to copy the URL from the email to the browser which is bad user experience.

How do you justify your decision for UI, architecture and 3rd party libraries?

UI

I was getting some inspirations from <https://pttrns.com/> to design my UI. I wanted to create something clean and simple so that the user immediately understands what he/she has to do. On default it should load all countries but only make visible the first ones. The search functionality was added to the top as it is the main functionality. Only once the user clicks on the country to get more details the map will adjust. I decided to use a Modal for the information to not overload the main container and to let the user focus on the details and the sharing functionality. Once the user closes the modal he/she can still see the location of the country and continue the search.

Architecture

I decided to let the App Component be the main component which contains the logic and fetches the countries. It populates then its children components (SearchBar/FilterBar/ListContainer/GlobalMap) with the countries. I tried to remain the other components stateless if possible, but due to Material UI restrictions I had to make some of the stateful. Generally speaking I always try to follow the pattern of having a stateful parent component who is passing the props to its children. I created a service and utils folder for API calls and utility functions.

3rd Party Libraries

Material UI had the components which I was planning to use and I always wanted to try it in a project so that is why I decided to go for it.

I used React-Share for the social share components as it has a good download rate and active collaborators.

Google Map React was saving me some time to not go through the massive Google Maps API documentation and they referenced Dan Abramov which is always a good sign. ;)

I needed React Geocode to get a more exact information about each location.

I used Firebase for deployment, because it is easy to use and fast to set up.