Project Summary
Chesapeake Bay Visualization

The goal of our visualization is to show water quality parameters and the types of species that the bay can support depending on these conditions. We start with a map that lists all the water quality stations.

A kml file is used to put on a map, in our demonstration case, it displays the variations of salinity levels through the bay depending on location. Our final implementation includes selectable parameters that will put on different kml files showing the difference between temperature, dissolved oxygen, and salinity throughout the bay on the map. This serves to give the viewer an idea of the different concentrations at different stations.

When a station is selected, a scatterplot pops up with various selectable values. The month can be selected via buttons to show the measurements for that specific month. There is a drop down menu for the different species in the bay that a user may select to see the correlation of the different parameters and the species' ability to survive in these conditions. There is also further detail with a drop down menu for the different stages of the selected species' life stages such as the egg, larvae, and adult stages. The values being shown here, salinity, dissolved oxygen level, and temperature helps you visualize the certain conditions that would allow certain species to thrive in the bay. The different colors of the circles represent the different water quality parameters. The outline of the circles will either be green or red with green correlating to a species being able to live in these conditions and red being that a species is unable to live in these conditions. This in essence gives the user the summary of what conditions are needed in order for a certain species to thrive in the bay.

Project Evaluation

After speaking with Dr. Chen, these are some of the areas that need further refinement. The depth scale needs to be improved by changing the color scale from blue to something like red and black to better show the different depth values.

We spoke about having the chart show up on the side along with the first view of the map rather than a pop up that takes up the whole screen. This has to do with the viewer's memory and reducing the number of steps to get information helps the user take in data more effectively, and efficiently.

As for when the user first looks at the visualization, it would be more helpful for the user to add more information on the station icons. The icon would contain aggregate information to aid in the user's ability to select the station they want to see more detail about.

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