Using our dashboard we attempted to answer the following research question: does cabin location of a passenger affect his or her survival on an ocean liner? To answer his question, the first visualization of our dashboard allows users to navigate different decks of the ship and see where passengers died or survived. A cruise line designer could focus in on "death clusters" to find out if there were sub-standard safety features implemented in those areas of the ship. Our second visualization, the "survival rate by deck level" plot gives a general overview showing whether or not certain deck levels were lacking in safety features compared to others. Similarly, the "survival rate by class" plot helps show a general overview of differences in safety features between cabins of varying classes. Overall, dashboard does well in addressing our research question.

Based on TA and peer feedback, the use of the dropdown as the single interactive feature in combination with the two static horizontal bar charts for survival rates by class and deck respectively is effective at showing how passenger fates vary by these two attributes which is difficult to visualize in two dimensions on a single plot since all three classes of passenger cabins (1-3) are found on all seven decks (A-G).

In its current form, the dashboard does not consider passenger fates by other attributes such as gender, age, marital status, or port of origin which are interesting but separate research questions requiring additional visualizations. To enhance the visualization of the current research question, we could also consider using colour to encode the three classes in the deck levels legend where the area of each colour is proportional to the share of its corresponding cabins class on each deck level. A more ambitious improvement would be to create a 3D interactive visualization of the ship which would allow the user to rotate the ship about the x, y and z axes to visualize passenger fate by specific cabin class, deck and nautical location (i.e. bow-stern, port-starboard) at a single glance with tooltips providing additional passenger attributes.

Furthermore, our dashboard had several important limitations which need to be considered, especially when trying to draw conclusion about our research question. First of all, our visualization assumes that all passengers were in their cabins at the time of the disaster. Additionally, the lack of historical records with information about each passenger's cabin location means that we have only plotted a sample of the population of all passengers, and need to be careful about drawing conclusions that generalize to the entire population of passengers. Finally, we need to be cautious in implying causation when the results are correlational. For example, class may affect the survival rate, not due to cabin safety of that particular class, but due to the a confounding association between passenger class and societal status (maybe first class passengers were more likely to get on a safety boat and survive).