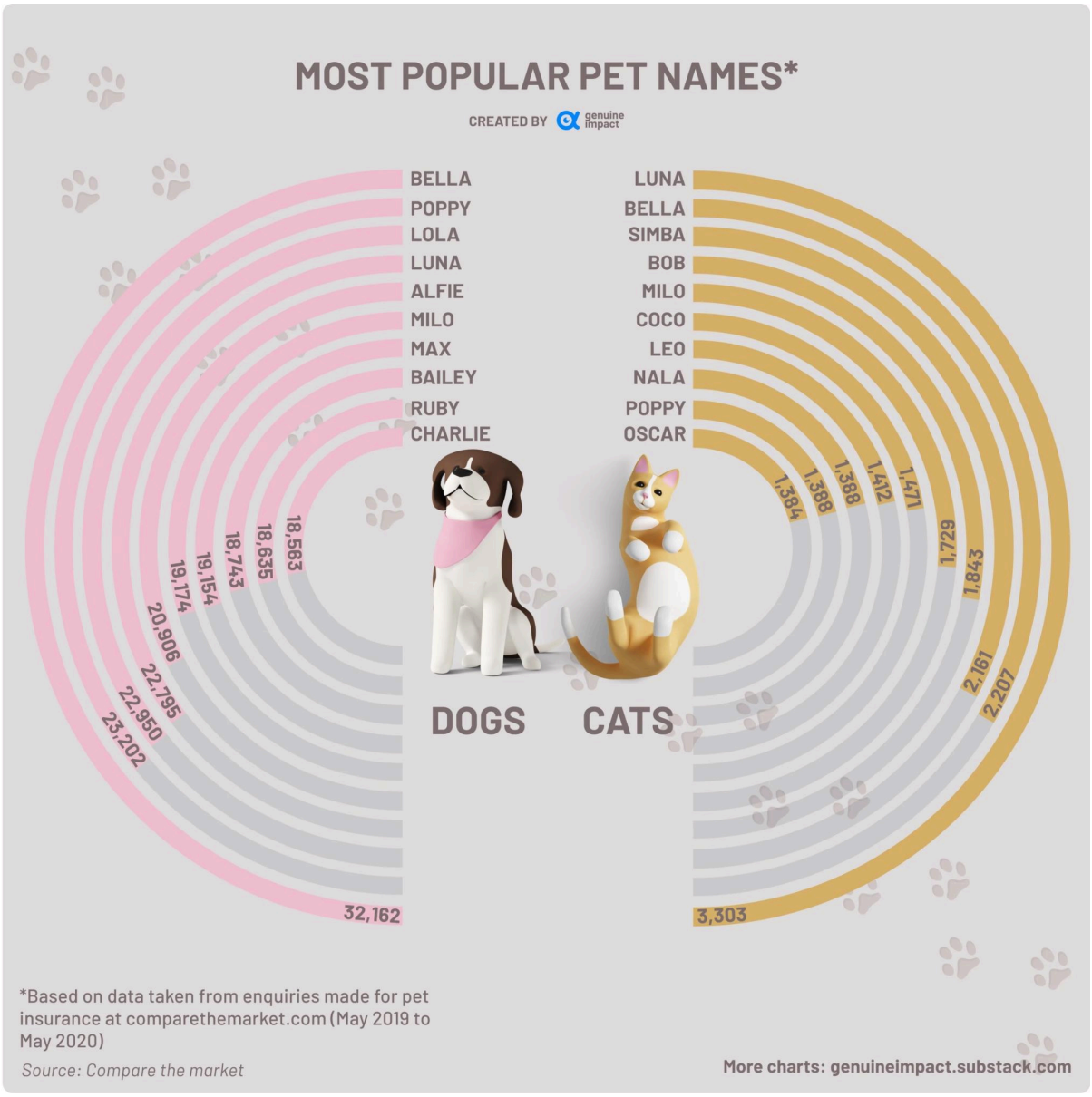


The above chart attempts to visualize the most common dog and cat names in the UK. This visualization requires no training for the users to understand the data. Specifically, the "outside-in" technique where the out-most name is the most popular for the dogs and cats gives users an easy and symmetrical interpretation of the ranking. Furthermore, with the radial graph, the design can easily fit in one screenshot with cute images within. While the visualization is very aesthetically pleasing, there are a few trade-offs with the representation of data as described below.

At the first glance, users' eyes will be drawn toward the radial bars. There is easily an assumption that the longer the bars are, the more dogs and cats that have the given name. However, due to the nature of circles having different circumferences depending on the radius, there is a

discrepancy in how the radial chart is represented. For example, based on the length of the bars, it could be easily assumed that there are twice as many cats named Bob than there are named Coco. This is the illusion of the circumference and is not the case based on the number shown. Another problem with radial charts is the difficulty to track the number to the name. Since there are so many lines appearing and arching next to each other, the need for users' eyes to follow through the how bar to see the number adds a level of difficulty.

With the nature of the data, this chart did not specify the country in which this naming frequency is from. Due to culture and languages, different countries will have different pet names. The ambiguity in this case can lead to many confusions. Furthermore, since the data was from an insurance company, all pets recorded in this data are those that are insured. As such, the skew of the data is toward the wealthy and those who chose to trust this company perhaps due to some company values. Hence, there should be a disclaimer about the source of the data and the possibility that this data may not represent the entire UK dogs and cats population.

Lastly, according to some reddit comments, the left side of this chart is not colorblind friendly. Unlike the scenarios with the colors having some underlying meaning, there doesn't seem to be any correlations between dogs having pink color and cats having yellow color. Furthermore, even in the case that there is some meaning behind the colorings, the designers should add some outline that contrasts the colors for better accessibility.

In my design, I attempted to mitigate the problems stated above. Specifically, by changing the radial chart into a bar chart at the expense of using up more space, there is no longer the discrepancy of length and number. Now, the numbers can be easily compared based on lengths and matching name to number would be easier since the eyes no longer need to track different arcs. Furthermore, with a disclaimer outlined and a more specific title, the nature of the visualization becomes more obvious.

To enhance the visualization and make the most out of the data, I added some interactions to the visualization. From the user's point of view, more than knowing about the default of the top few popular pet names, they would be more interested in knowing the popularity of their own pets' names. Hence, I added a search bar such that the users can add more bars to the chart by clicking on the suggestion after typing their inputs. Specifically, hovering over a specific suggestion will darken the row to indicate the selection. Furthermore, to enable the undo ability, clicking on a bar would result in deleting that bar from the chart. Based on in class critique, I considered adding a limit to the number of bars that users can add. However, to give more freedom with how they want to view the data, I decided against setting any sort of limit. Then, to utilize the availability of data about dog and cat breeds in relation to the names, I added the interaction of hovering over the bars to show a distribution of different breeds. To know more, the users simply have to hover over the color of interest and the information will pop up as text at the top of the chart. However, after implementing this design, the lack of data makes the distribution mainly categorized as "other". Regardless, to guide the users more

regarding the interactions, the cursor changes into a pointer when hovering over a bar on the chart. Then, to increase the accessibility of the visualization and increase the awareness of which part of the chart is hovered over, the colors of each distribution will be highlighted with white border when the cursor hovers over it.

My visualization: https://info4310-hw4-ja1p.onrender.com/

Most popular cat and dog names in the UK

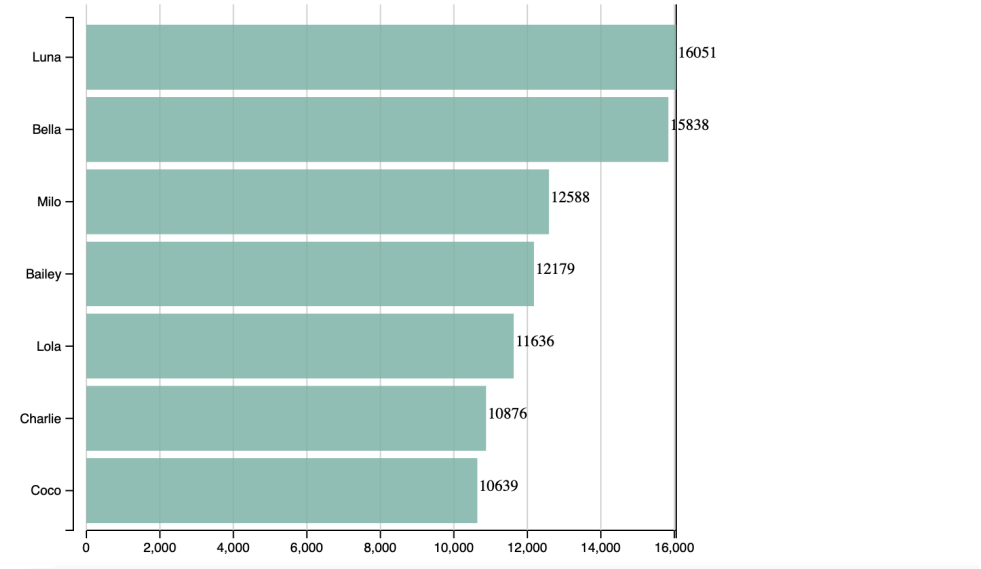
- Use search bar to add bars to the graph
- Click on a bar to remove from the graph
- Hover over a bar to show distribution of breeds
- Hover over colors in the distribution of breeds to view more information

*Disclaimer: data may be skewed due to sourcing from an insurance company

*Lots of data are missing for distribution, so there are a lot in the "other" category

Dog

Search dog name



Cat

Search cat name

Name: Luna

Breed: British Shorthair

Number: 644