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INFO4310/5311
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HW4 Report

Final Product: https://info4311-spot-a-numbat.onrender.com
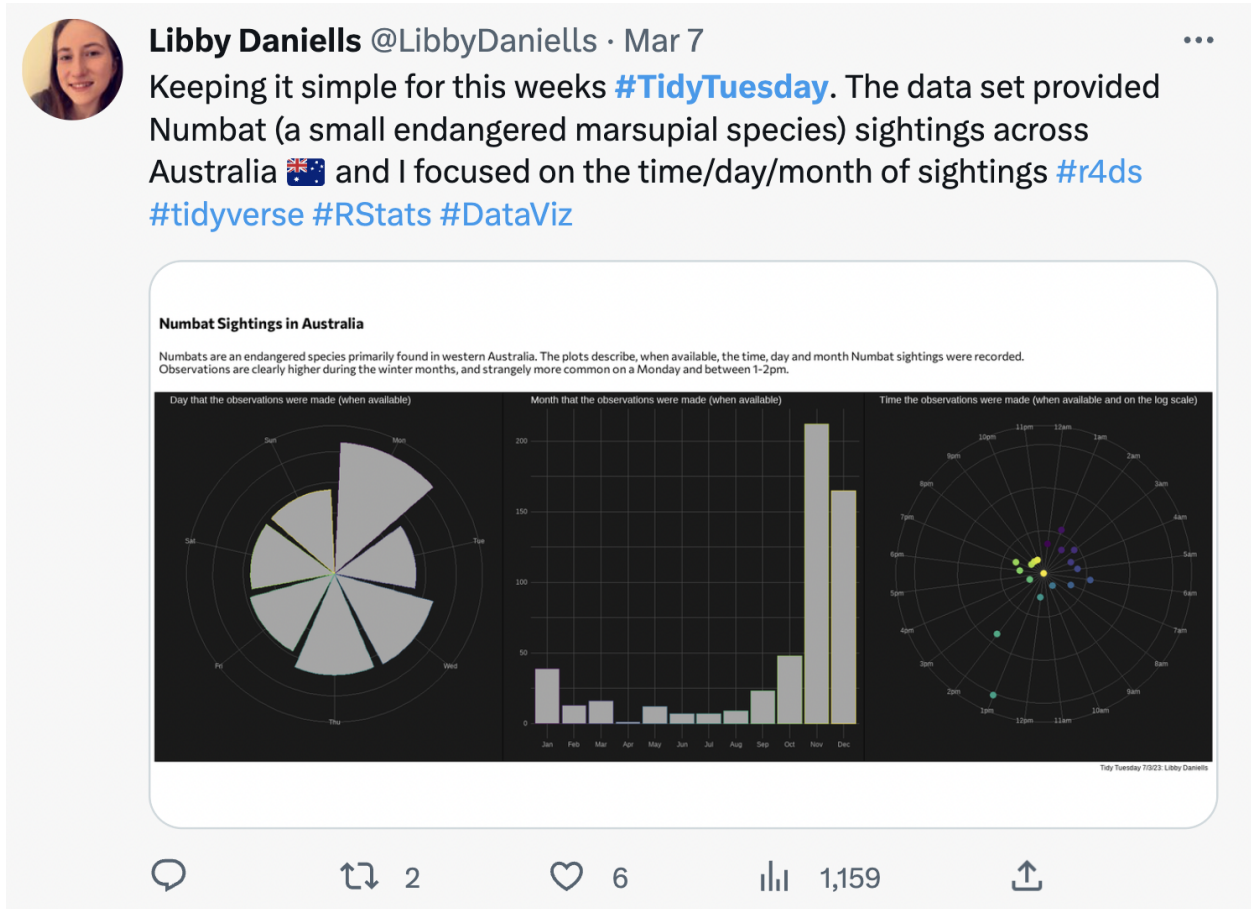
Visualization Chosen and Critique

- Link to data: Numbats in Australia

The purpose of this visualization was to convey the time, day of the week, and months
for which the Numbat was sighted in Australia. To convey a sense of time, the designer's
implemented a circle to represent the days of the week and have the radius of the sector
correspond with the average number of sightings. She's also creatively used a 24-hr clock
radian graph to visualize the amount of sightings over the hours of the day. All her
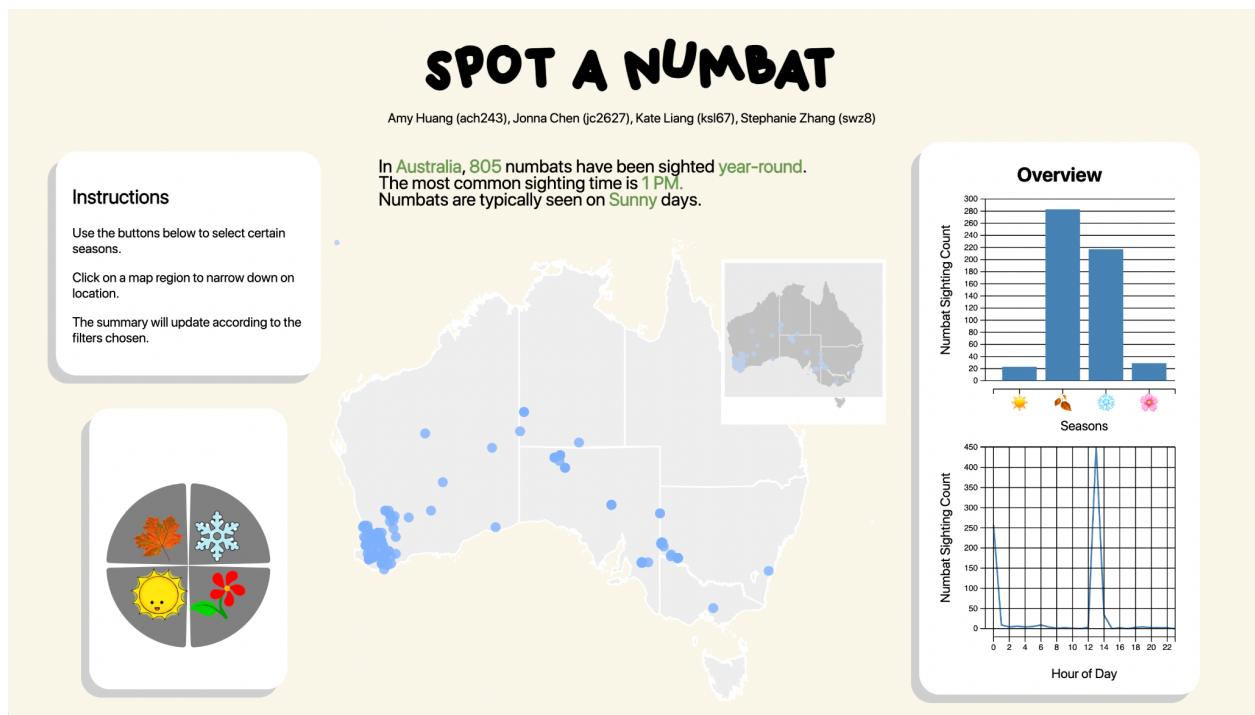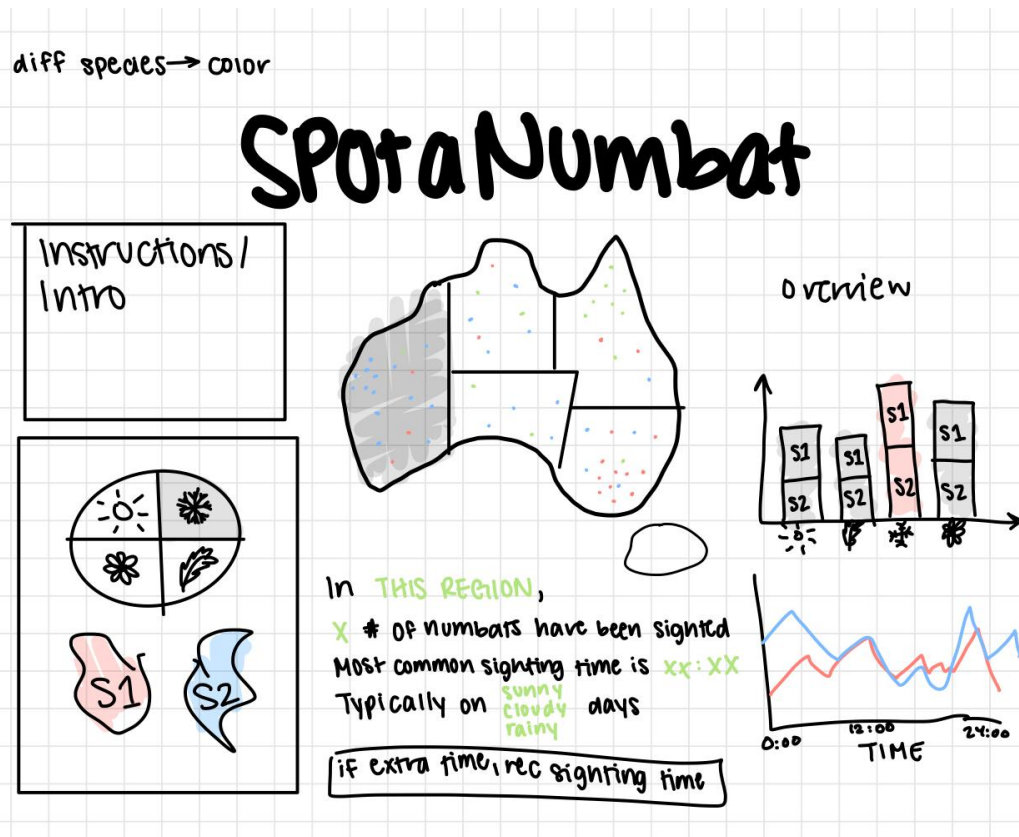
visualizations each show a different unit of time and she keeps a consistent color scheme. However, these colors also don't particularly carry any meaning.

Because two of the plots are visualized in a circular graph, the axis corresponding to radius is not labeled appropriately just based off the plot. However, because the author gives very descriptive titles of the graphs, the general idea of each plot is conveyed. The 24-hour clock was not intuitive at first.

The author averages out the number of sightings across the days of the week and utilizes length (of the radius) to represent those averages. Unfortunately, we don't believe using a circle chart to show that is effective because our first instinction was that it was going to be a pie-chart that illustrates the proportions of the sightings per day. We are still a little confused by the numerical axis labels on the third plot. We decided to aggregate the month data into seasons since this would allow for clearer observation of trends between times of the year. This is especially useful since Australia is in the southern hemisphere, so which months correspond to which seasons are different in comparison to the United States. Doing this makes our visualization more accessible to our American audience. The layout for the graphs is something we also hope to improve upon. The current order of Day, Month, Hour is not as intuitive as an increasing the scale granularly. We removed the day graph — animals do not have a concept of days of the week.

Although it wasn't a part of the author's goal, we believe showing the actual location of these sightings on a map is extremely useful for people interested in this subject because Numbats are so rare and it is important to recognize and preserve the areas they treat as their habitat.

Our New and Improved Visualization

diff species → color

SPotaNumbat

Instructions/Intro

overview

In THIS REGION,
X # of numbats have been sighted
Most common sighting time is XX:XX
Typically on sunny cloudy rainy days

if extra time, rec sighting time

S1 S2

0:00   12:00   24:00
TIME

SPOT A NUMBAT

Amy Huang (ach243), Jonna Chen (jc2627), Kate Liang (ksl67), Stephanie Zhang (swz8)

In Australia, 805 numbats have been sighted year-round.
The most common sighting time is 1 PM.
Numbats are typically seen on Sunny days.

Instructions

Use the buttons below to select certain seasons.

Click on a map region to narrow down on location.

The summary will update according to the filters chosen.

Overview

Numbat Sighting Count

300
280
260
240
220
200
180
160
140
120
100
80
60
40
20

Seasons

Numbat Sighting Count

450
400
350
300
250
200
150
100
50
0

0 2 4 6 8 10 12 14 16 18 20 22

Hour of Day

For our new and improved visualization, we wanted to emphasize optimizing the result for the user: someone who wanted to spot numbats in Australia.

To address the display of numbat spotting frequency in terms of location, we implemented a map. Since we found that a lot of the data was concentrated in one region, we added a minimap for easier exploration. We also allow for these regions to act as a filter, as they are clickable.

We also thought about what would be the most important factors to a sightsee-er. Most likely, this would be the time of year, location, and time of day that the numbats were most commonly seen. We provide an overview of these statistics on the right-hand side of the visualization. In order for our American audience to not confuse the Southern hemisphere's seasons with that of the Northern hemisphere, the filtering and overview is based on seasons and not on months. The bar chart displaying total count of numbats in all of Australia/a selected region uses season as a horizontal axis.

The summary text we've accompanied with the visualization quantifies values in the bar and line charts – one main critique we had for the original visualization was that the y-axes were not labelled and easy to make out. We could only see relative to other days/months/hours which had the most sightings. The summary text also provides insight into the most popular weather condition for which these numbats were spotted. It makes it extremely easy for users to get the gist of their filter selections and the data that's being presented to them.

Finally, our visualization also will contain a block of introduction and instruction text to ensure that the user knows what's being displayed to them and how to use our visualization. The order in which the visualization is displayed with the instructions and filtering aligned to the left and the main visualizations to the right follow a familiar design pattern.