Biodiversity for the National Parks

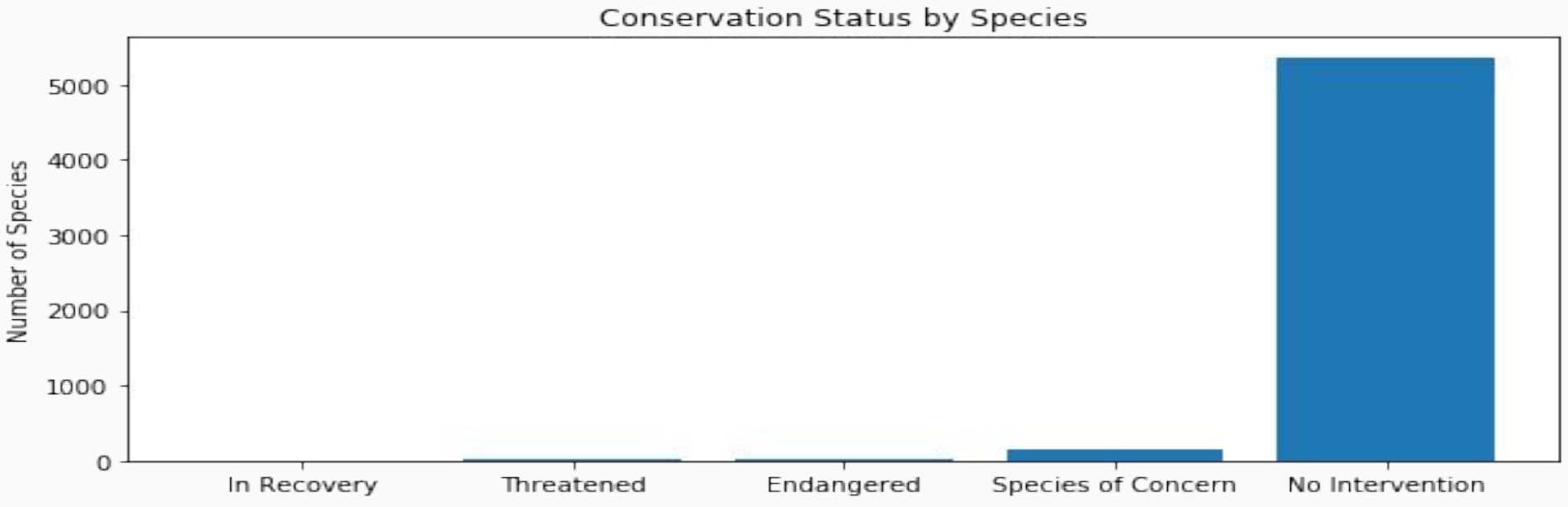
A Codecademy Capstone Project

Species Info

7 different categories that contain 5824 records of data for the species info csv document.

The majority of the conservation status column of data is left blank however. This makes it so that the results when looking at the count of values by conservation status look skewed until you assign them a value.

Conservation Status by Species



Significance Calculations

With looking at this data to see if Mammals are more likely to be endangered than Birds we compare the values in the dataset by running a chi-squared test. After doing so we end up with a p-value of 0.68759 which shows that the difference between protected Mammals and protected Birds is not significant and a result of chance.

Then testing the data for Reptiles to Mammals and we get a p-value of 0.03835 which is significant and we can conclude that certain types of species are more likely to be endangered than others.

Conservation Recommendations

After looking at the dataset and seeing that the difference between Mammals and Birds is left more so to chance than Reptiles to Mammals I would recommend that they focus their efforts on the Reptiles as some species are more likely to be endangered than others.

Foot and Mouth Disease Study

The sample size by location from the observations dataset helps us set how many sheep would need to be observed from each park. Having this value allows the scientists estimate about how many weeks they would need to study each park in order to have the confidence they collected enough data to know if the program was successful at reducing the foot and mouth disease or not.

Foot and Mouth Disease Study

The Park Rangers have been running a program to reduce the disease and we use the data set to help determine the sample size and once we have that we can tell how many weeks it would take to observe the sample set size. Yellowstone National Park with a sample size of 870 would take about 1.7 weeks to observe this sample size at 870/507. Bryce National park would take a little longer at 3.5 weeks with the sample size of 870/250.

Observations of Sheeps per Week