

BIODIVERSITY

WHAT SPECIES SHOULD WE BE CONCERNED ABOUT?

OVERVIEW OF THE DATA

species_info.csv



WHAT DID I NOTICE ABOUT THE DATA?

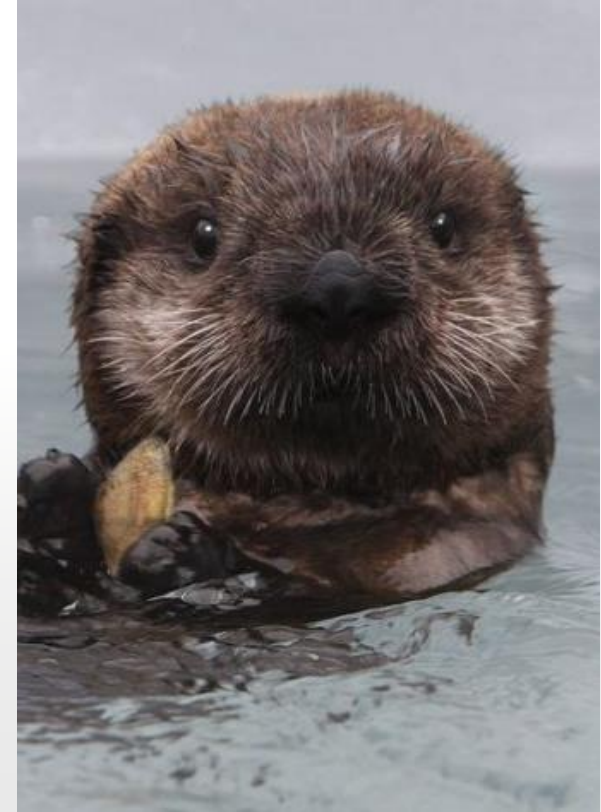
- 7 categories of species
- 4 categories of conservation status
- 5824 different type of species
- Less than 3% in total need protection status
- And of these with protection status – around 14% are either ‘Threatened’ or ‘Endangered’ which will need significantly more observation and attention

WHAT DID I NOTICE ABOUT THE DATA?

- Mammals and bird have the highest percent of 'protection' status within their total species
- Mammals are not likely to be more endangered than the bird species however
- Vascular Plant has the least proportion of 'protection' status in their total species

FINDINGS AND RECOMMENDATIONS

Significance Calculation



MAMMALS VS BIRDS

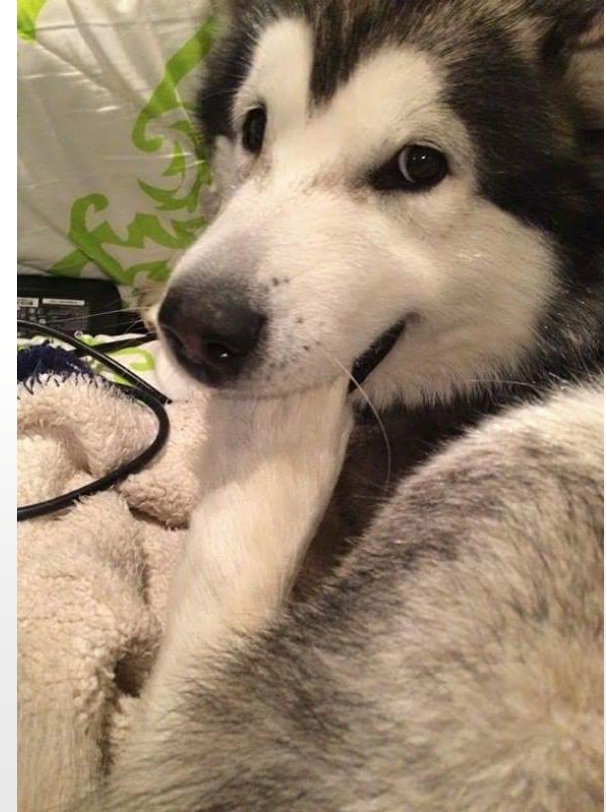
- Based on the chi-square test, and using a contingency table, Mammals are not more likely to be endangered than the Bird species
- The test has a p-value of 0.45 which means we would not reject the null at 95% significance (p-value of 0.05)

RECOMMENDATIONS

- Initial analysis suggests that equal amount of funding/observation/care is given towards Mammals and Bird as they have the same proportion of endangered species
- I would however recommend a further deep dive into the mix of 'protection' severity within each group to shed further colour on the situation
- I would also recommend investigating the rate of movement (changes) within each group of its 'protection' severity over time which would highlight the group that is facing the greater challenges among its species

FOOT AND MOUTH STUDY

Determining the sample size



HOW DID I DETERMINE THE APPROPRIATE SAMPLE SIZE?

- Using the sample size calculator at Optimizely:
 - Baseline Conversion Rate = 15%
 - Minimum Detectable Effect = 33% (5/15)
 - Sample Size per Variation = 520
 - Significance Level = 90%

HOW DID I DETERMINE THE APPROPRIATE SAMPLE SIZE?

- Which means we will then these many weeks of observations
 - Bryce National Park = $520 / 250 = \text{more than 2 weeks}$, so 3 weeks would suffice
 - Yellowstone National Park = $520 / 507 = \text{more than 1 week}$, so 2 weeks would suffice

APPENDIX

All of the graphs that were created



