Data analysis capstone: Biodiversity for the National Parks

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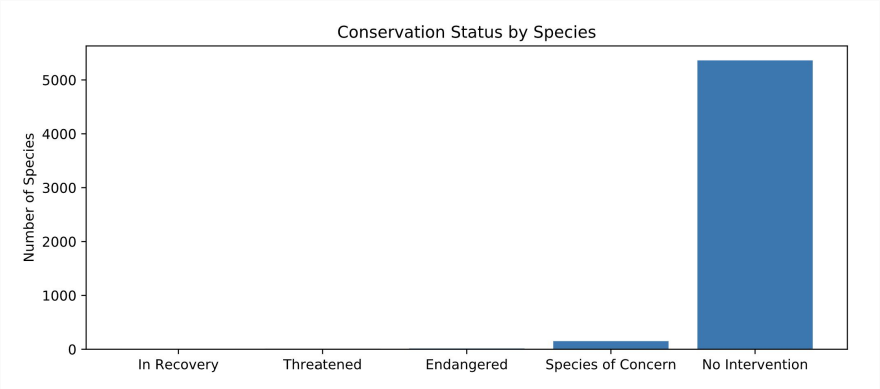
Objective

Reason for the analysis:
Biodiversity is National Parks are at risk, as more and more species become endangered and thus at risk of becoming extinct.

Objective:
Investigate if there are any patterns to the types of species in the National Parks that become endangered to gain insight into how to prevent this from occurring.

Observations from data

- A large % of species require no intervention
- Of those that require some form of protection, the most common are Species of Concern.
- Mammals are the most commonly protected species In % terms (17.04%), Birds
- Vascular plants, the most common species (4262) in National Parks, are the least protected species (1.07%)



Results from Statistical Analysis

- Performed a Chi-Squared Test for significance
- No statistically significant difference between mammals and birds (p-value ~0.688) and therefore not indicative of endangerment.
- Statically significant difference between mammals and reptiles (p-value 0.038)
- We can conclude that certain types of species are more likely to be endangered than others.

Recommendation

Given the statistically significant results that some species are more likely to become endangered than others, we recommend investing additional conservationist time and resources into the protection of certain species such as Mammals to minimize the risk of endangerment.

Data analysis capstone: Foot and mouth Disease Study

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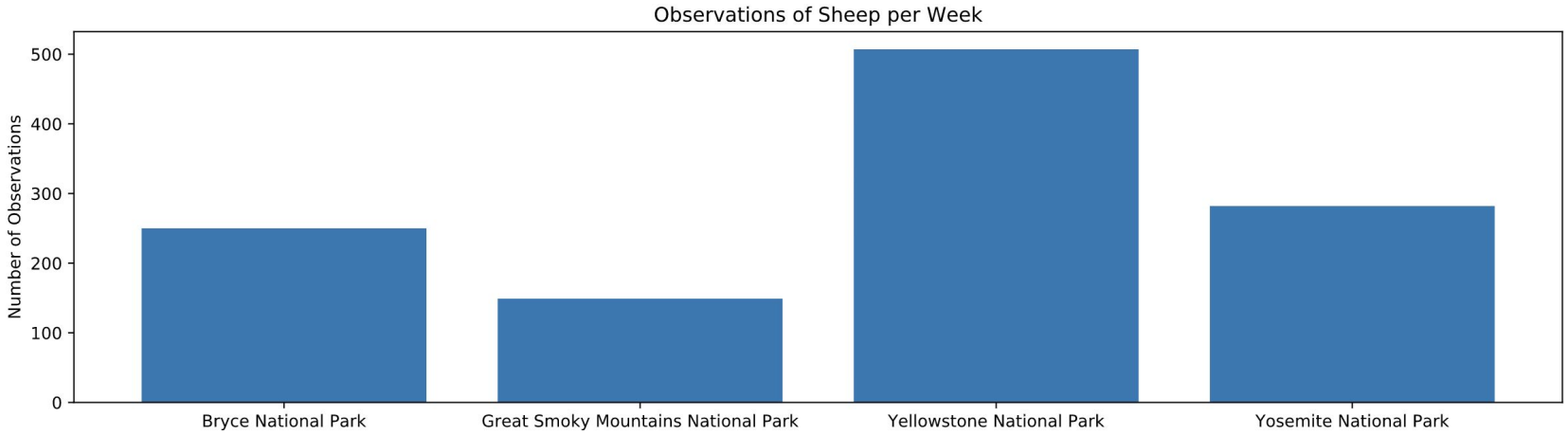
Sample Size Determination

- Baseline conversion rate = 15%
- Minimum detectable effect = 33.3%
- 95% confidence
- Sample size per variant = 1,100
- Scientists will have to spend 1.71 weeks to observe enough sheep
- Scientists will have to spend 3.48 weeks at Bryce National Park to observe enough sheep

Observations per week



Thank you

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