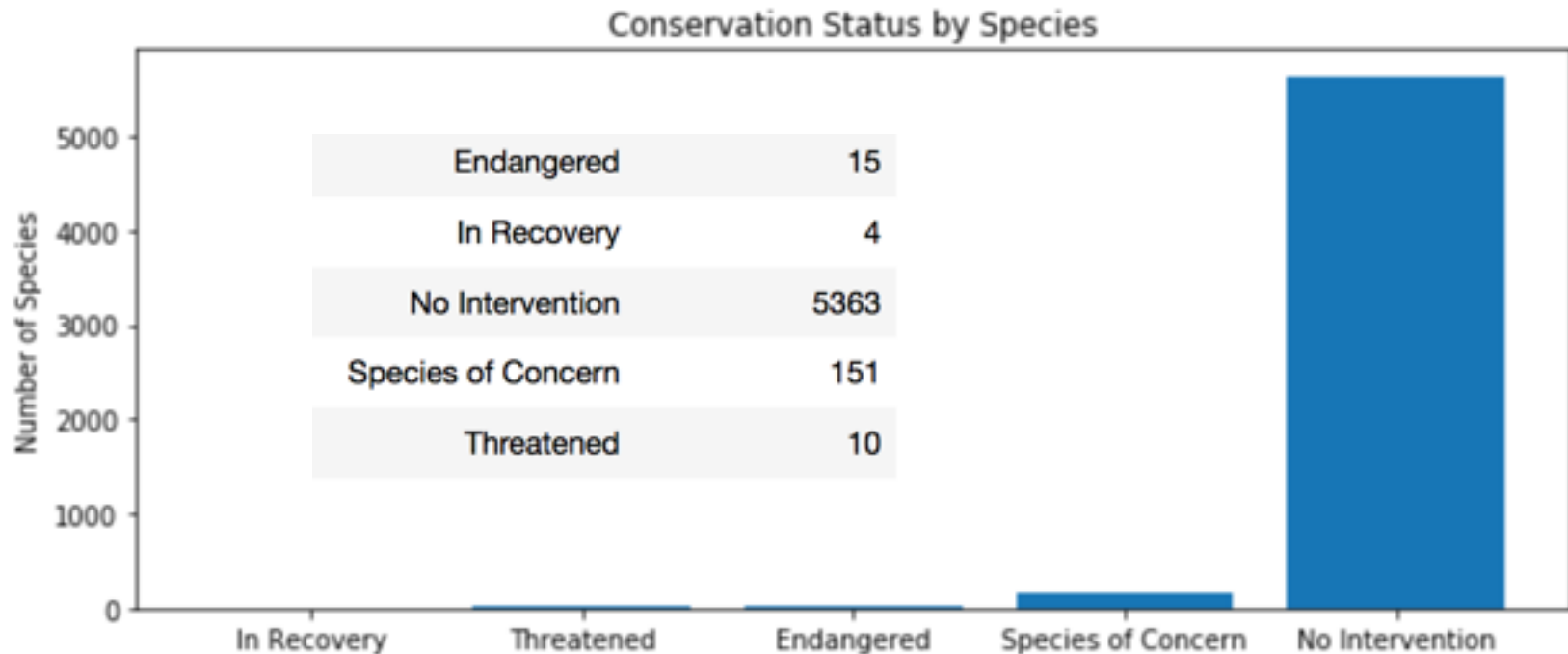# Project Outcome Biodiversity Capstone

codecademy username:
bleikera

National Park Register with conservation status of various species

5541 different species in 7 categories

Mammal, Bird, Reptile, Amphibian, Fish, Vascular Plant, Nonvascular Plant

Conservation Status by Species

Endangered	15
In Recovery	4
No Intervention	5363
Species of Concern	151
Threatened	10

Protection Status of various Categories

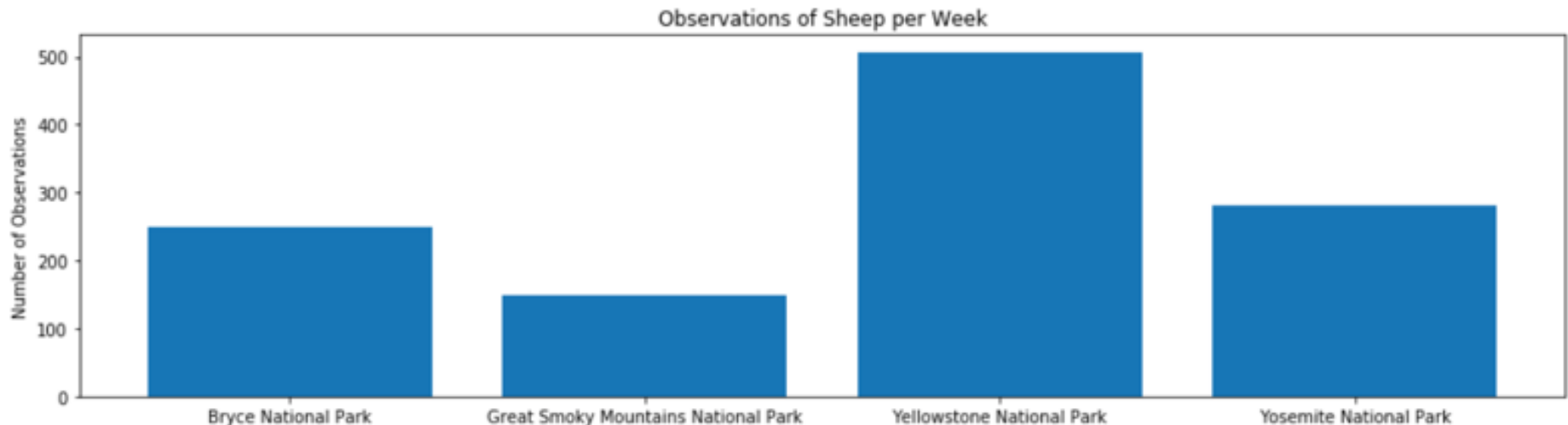| category	not_protected	protected	percent_protected
Amphibian	72	7	0.088608
Bird	413	75	0.153689
Fish	115	11	0.087302
Mammal	146	30	0.170455
Nonvascular Plant	328	5	0.015015
Reptile	73	5	0.064103
Vascular Plant	4216	46	0.010793

Based on the above data, we checked whether mammals are more likely to be endangered than birds. → Based on available data, there is **no statistically significant difference between the endangerement of mammals over birds** (chisquare pval 0.69).

However, a **statistically significant difference in the endangerement of reptiles and mammals was detected (Chisquare, pval 0.04).**

Analysis of Conservationists Data

- 23296 observations in 4 different National Parks during one week.

- Focus of the analysis on sheep.

park_name	observations
Bryce National Park	250
Great Smoky Mountains National Park	149
Yellowstone National Park	507
Yosemite National Park	282

Observations of Sheep per Week

Foot & mouth disease Program

- Background:
  - currently 15% of sheep in Bryce National Park suffer from the disease
  - Yellowstone National Park program to reduce the disease
- Recommendation
  - In order to be 90% confident that the program is effective (i.e. 33% reduction of the concerned population), a sample of **510 sheep observations** is required.

  → roughtly 2 weeks of observations in Bryce and 1 week in Yellowstone