Introduction to Data Analysis
Capstone Project
Biodiversity for the National Parks

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Codecademy

Species_info.csv

	category	scientific_name	common_names	conservation_status
0	Mammal	Clethrionomys gapperi gapperi	Gapper's Red-Backed Vole	nan
1	Mammal	Bos bison	American Bison, Bison	nan
2	Mammal	Bos taurus	Aurochs, Aurochs, Domestic Cattle (Feral), Domesticated Cattle	nan
3	Mammal	Ovis aries	Domestic Sheep, Mouflon, Red Sheep, Sheep (Feral)	nan
4	Mammal	Cervus elaphus	Wapiti Or Elk	nan

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Category of the animal, in scientific classification- class
Possible entries: Amphibian, Bird, Fish, Mammal, Reptile, Vascular and Nonvascular Plant
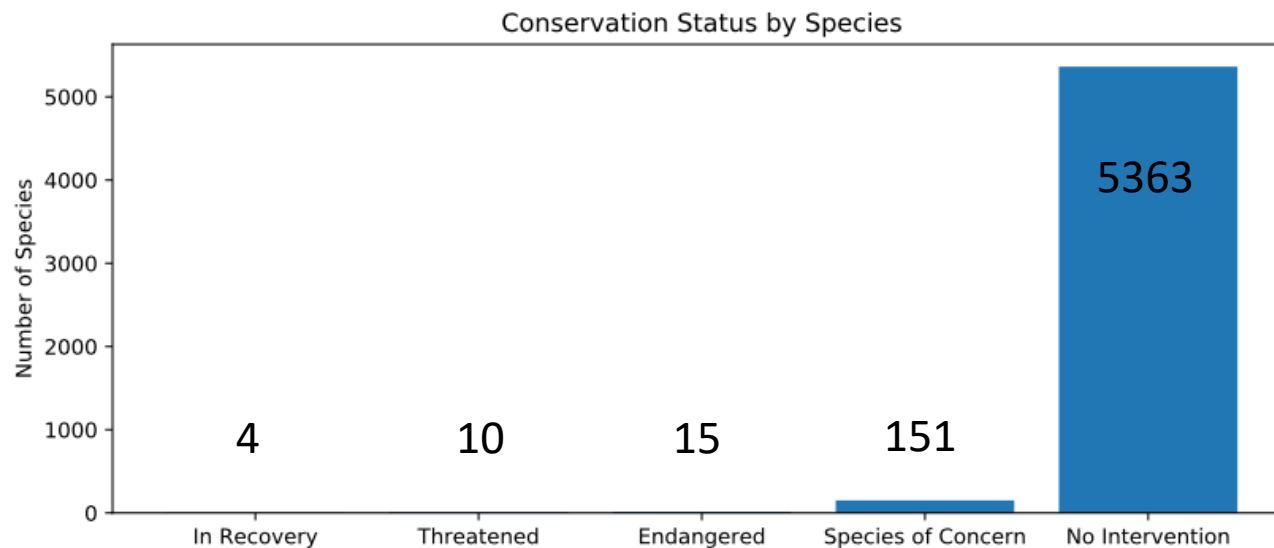
Name of the species

Common name for the species

Conservation status of the species. **Possible entries:** NaN (No Intervention), Endangered, In Recovery, Species of Concern and Threatened.
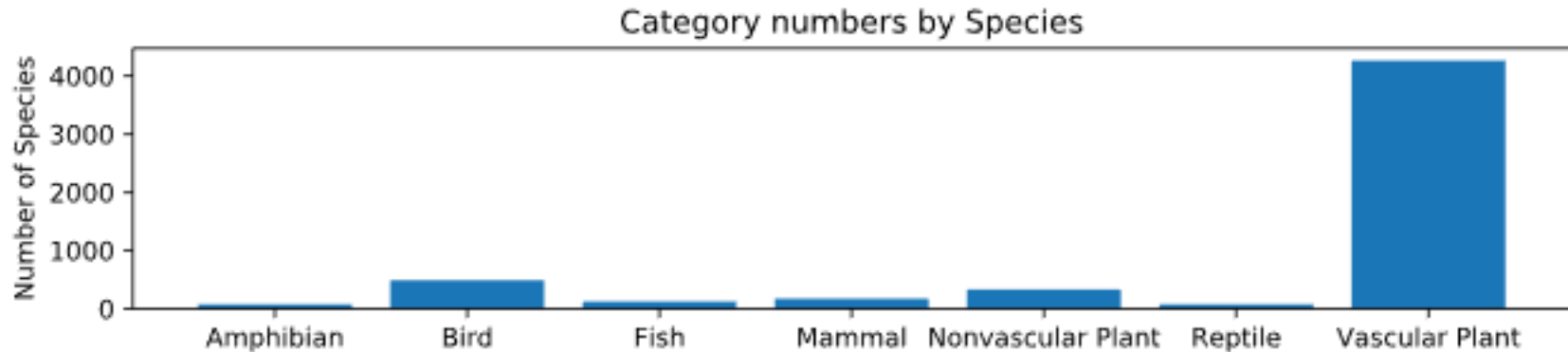
Species_info.csv

→ Total number of species: 5541
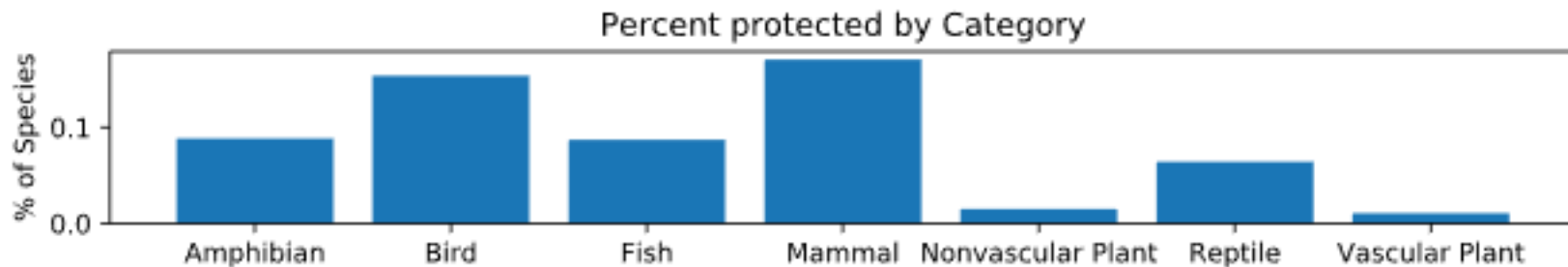

Conservation Status by Species

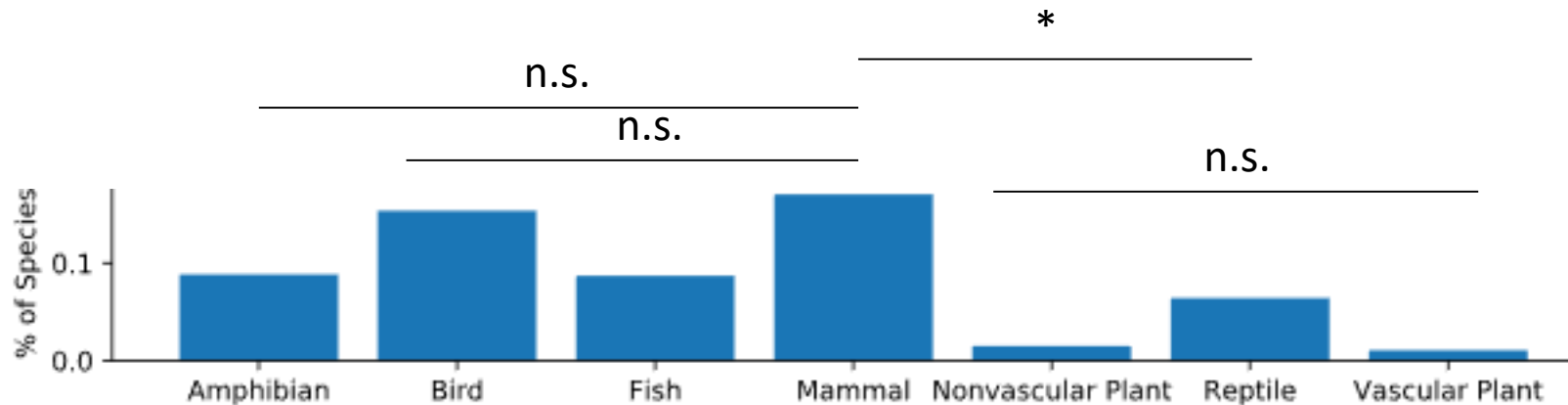→Total of 180 species out of 5541 are in danger of extinction or recovering

Species_info.csv

Species_info.csv has most information on vascular plant species.
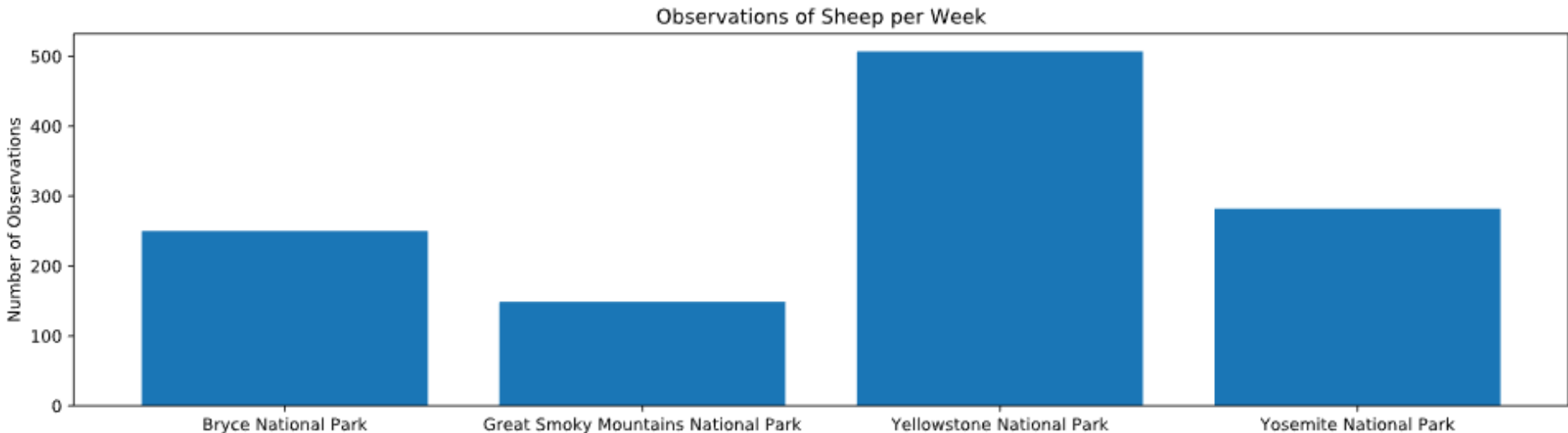
Endangered status between categories

Significance between % of protected species between categories

It looks like mammals and birds are at a higher chance of extinction, so more efforts should go into preserving populations of corresponding species (in these parks).

Sheep in national parks

- There is a total of 5 species of sheep in the parks.
- Ovis canadensis, also known as the bighorn sheep, is a species of concern. It is only found in the Yellowstone National Park.

Observations of Sheep per Week

Foot and Mouth Disease

Task: Figure out sample size to conduct a study on effectiveness of foot and mouth disease interventions.

-15% of sheep have foot and mouth disease in Bryce National Park.

-Want to detect reductions of 5%

-90% statistical significance

→ Baseline conversion rate=15%, Minimum detectable effect= 5/15*100%= 33%

→ From sample size calculator, sample size= 890

→ Weeks of observing per park based on the sample size calculation

Park name	Weeks observing
Bryce National Park	3.56
Great Smoky Mountains National Park	5.97
Yellowstone National Park	1.75
Yosemite National Park	3.16