

A decorative graphic on the left side of the slide consists of a network of thin, light green lines. These lines are arranged in a way that resembles a circuit board or a stylized tree structure, with many small circles at the end of the branches. The lines and circles are light green, matching the overall color scheme of the slide.

# Biodiversity Project

By Ryan Klorman

# Species\_info.csv

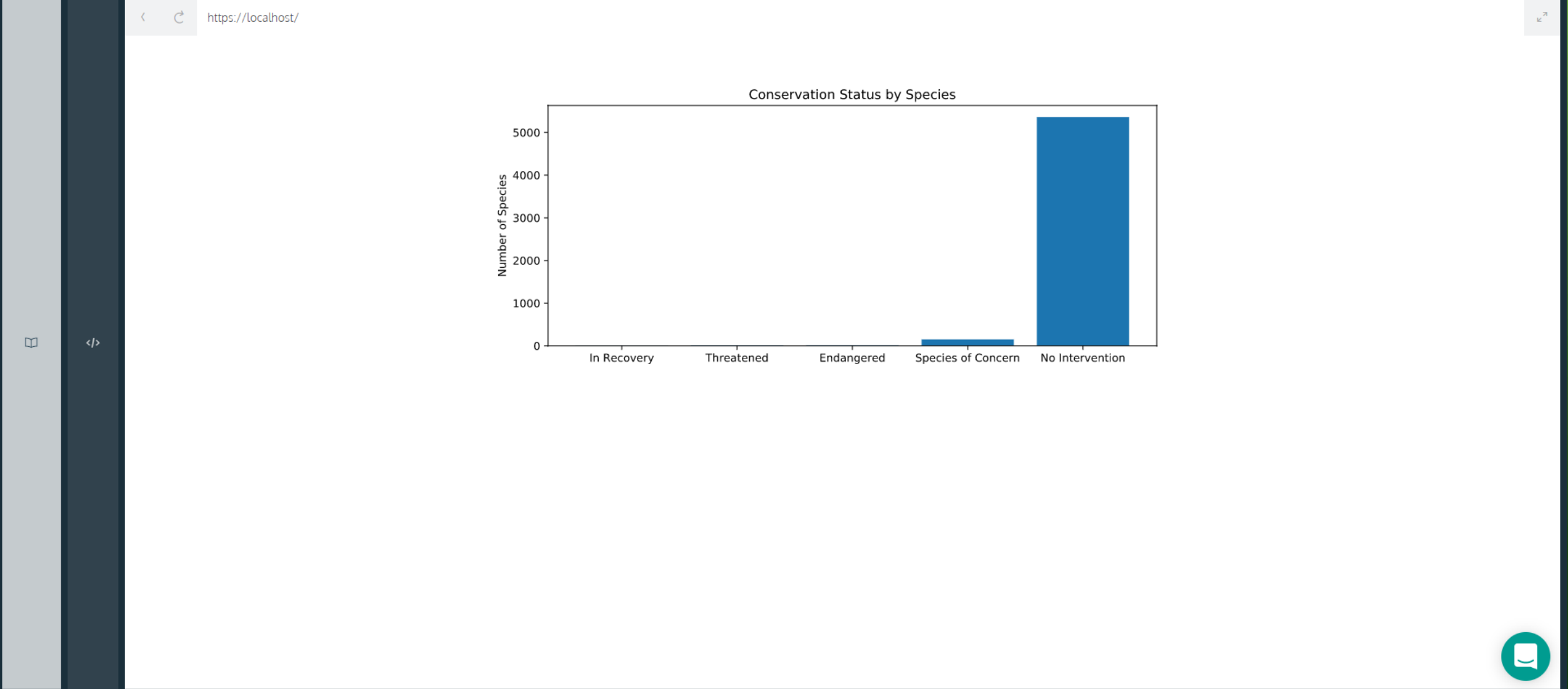
- This CSV file gives us info about different species in our national parks, including:
  1. The Scientific Name of each species
  2. The Common Names of each species
  3. The species conservation status
- When we ran some of the lambda's and began adding different columns based off of the data given, you really start to paint a picture of what this DataFrame is trying to tell:
  1. Thy types of species we are studying
  2. Which are endangered
  3. Which are being protected
  4. Does species include things other than animals?

## Species\_info.csv (continued)

- From our Data, we can see that the most unprotected animal category in our National Parks are the Reptiles.
  - Surprisingly, the category with the most unprotected species isn't even an animal at all. It would be the Vascular Plants and the Non Vascular plants a close 2<sup>nd</sup>
- When Looking for the most protected species, we use the data pivoted to see that Mammals are the “Most Protected” at 17%. Birds a close 2<sup>nd</sup>, at 15%.
- The least protected is, once again, the Plant species. Vascular Plants have 1.08% of their species protected and Nonvascular Plants have 1.5% of their species protected.

# Species\_info.csv (Summary)

- Based on the calculations, it seems that the conservationists focus most of their concerns with the Mammals and the Birds. I believe this is because these are the species most of Society notices. For example, the Bison and the Elk: We see these animals directly and have a sense of a relationship with them.
  - Fish: Cant see them directly; hard to know if a specific species is dying off
  - Plants: Most people cant tell the difference between one plant or the other; hard to consider important
- I recommend to conservationists that if they want to follow the data provided, plants become more of an area of concern when protecting specific categories of species.



# Foot & Mouth Disease Study

- We start by investigating which parks have sheep and if they are protected.
- We quickly find that the *Ovis canadensis* is protected in 5 of the national parks we are looking at.
- We merge the dataframes, species & observations, to see how many observations of sheep have taken place in each of the 5 national parks

# Foot & Mouth Disease Study (Continued)

- Moving on to trying to combat the Foot & Mouth Disease:
  - We want to determine how many observations need to take place to make sure the disease is under control.
  - We get a sample size variant of 870. Which means we need to have 870 sheep observations to have a statistical significance of 90%.
  - After plotting our Bar graph of “Observations of Sheep per Week”, we can see how many weeks its going to take to observe the 870 sheep per park
    - Yellowstone National Park- 1 Week
    - Bryce National park- 3 Weeks



Cases ~ Salesforce - Ente xUnit 2: Data Manipulation xBiodiversity Capstone Pro xUse snipping tool to cap x

Secure | https://www.codecademy.com/courses/biodiveristy-capstone/lessons/protected-status-analysis/exercises/sheep-observation-plot

AppsSalesforceBoxxAd AppsgroundTruth ResourcexAd AnalyticsMarketplaceMPCB Clients / PrognxAd Audience BuilderAvails ToolBatch Geocoding ToolBatch geocodingMetersto Miles ConvePOI MonitorBatch Geocodering

codecademy / PROBiodiversity Capstone Project

https://localhost/

### Observations of Sheep per Week

National Park	Number of Observations
Bryce National Park	250
Great Smoky Mountains National Park	150
Yellowstone National Park	500
Yosemite National Park	280

13. Plotting Sheep Sightings

Back13/15Next

Get Help