Miles A. Peña

DSC 530

Final Project

03/02/2023

The dataset contains the “cumulative number of species listed as threatened or endangered (accounting for delisting) under the Endangered Species Act, from 1 July 1976 through 27 October 2010 for all taxa, plants, animals, vertebrate groups (amphibians, birds, fish, mammals, reptiles), and invertebrate groups (arachnids, crustaceans, insects, and mollusks)” (Flather et al., 2010). The question I am seeking to answer is whether or not species endangerment/threat levels relate to those of other species. I also would like to know how time has affected these levels per species and for all species as a whole. Ultimately, the aim of this project is to determine the relationship (if any) that exists between time and threat levels of extinction as well as the impact (if any) that the endangerment of one species has on another.

After looking at the relationships between these variables with scatter plots, CDF, PMF, and correlation calculations, the conclusion is that there is correlation between all of the variables tested. As time goes on, the number of threatened or endangered species increases, and in comparing different groups of species directly, there is a strong positive relationship.

In terms of missing aspects of this analysis, I think I had a rough time understanding the dataset for a bit. I do not know if there is anything that could have helped better answer my questions. I think that I specifically tailored my questions to be those I felt the dataset could help reach a conclusion for. I feel like it is a great dataset that lends itself for so much more and would love to keep working with it in the future.

One of the biggest challenges I faced was date time formatting and indexing as this was all very new to me but necessary for the point of my project. There was a whole lot of trial and error but ultimately a great learning experience. As I mentioned earlier, I did struggle a bit with making sense of what the data was telling me so that was another challenge for me.

Reference:

Flather, Curtis H.; Knowles, Michael S.; Jones, Martin F.; Schilli, Carol J. 2014. Wildlife population and harvest data for Forest Service 2010 RPA Assessment. Fort Collins, CO: Forest Service Research Data Archive. https://doi.org/10.2737/RDS-2014-0009