## Overall Goal:

1. Provide a standardized method for identifying camera trap photos as accurately and efficiently as possible.
    (a) *Ideally* we create a tool that:
        i. Allows users to easily upload photos to an open source repository that is also accessible after photos have been identified
        ii. When photos are uploaded to this tool/interface/whatever, they are given a standardized naming (e.g., [camera.name]_[date.range]_[latitudexlongitude]_[image.num].jpg) and then the interface will sort the photos on this open source repository accordingly (i.e., by camera, date, location, and time)
        iii. To create a tool that is accessible to users that have little to no experience coding
        iv. To make an end product that is:
            A. An excel sheet with the columns: image_name, camera_name, date, time, latitude, longitude, temperature, Genus, species. Genus and species could be 'blank' or 'vehicle'.
            B. Within in excel sheet, have hyperlinks to images so user can easily download photos or verify model. *Ideally* hyperlinks allow users to look at the images right before and after that image as well
            C. Bar charts [see attached example in email]

## Next steps:

1. Look into Fraser Shillings new tool: https://wildlifeobserver.net/
2. Verify Mikey Tabak's tool: https://github.com/mikeyEcology/MLWIC
3. Do some initial investigating into alternatives options. Check Cat's notes in attached 'MachineLearning_notes.pdf'.
4. Find a good place to store images — ideally not on TNC's box.

## Possible Directions:

1. Use MLWIC repo to make a first pass at images to weed out humans, blanks and cars when the model is >98.5% confident. Then...
    (a) Use another tool to identify the rest
    (b) Or train a new machine learning tool using MLWIC package that is more accurate for the Northeast (with the potential to expand)
2. Find or create an entirely new tool or interface

## Some Things to Remember:

1. What do we do about multiple animals in one shot? If more than one deer can the model count? Or if there are two species.
2. Can we manage to build a tool that can differentiate between a dog and a coyote or fox?

3. Can we make a model that is expandable? That we can tweak after this program is over at the end of the summer?

4. Is there a way to make this useable or accessible without a cluster? Maybe a website or an online tool?