PROJECT TITLE: Hummingbird Classification

PROJECT SUMMARY (Brief description of the goal, key analysis plan, key data feature- especially if the data is complex)

The purpose of this project is to build a hummingbird species classification model. During this project I will collect hummingbird images, create image pre-processing code for the data set, create a binary (male/female) bird classifier, create a species classifier, and use the classifier to predict future bird images.

MILESTONES (Bullet point STEPs in your project. You can tag “DONE” for things are done)

Project Timeline:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Task Week | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Initial Project Proposal | | |  |  |  |  |  |  |  |  |
| Collect/classify photos from the web and my camera | | |  |  |  |  |  |  |  |  |
| Build data cleaning / hummingbird image processing tool | | |  |  |  |  |  |  |  |  |
| Create binary bird finder classification model | | |  |  |  |  |  |  |  |  |
| Create multi-categorical species classification model | | |  |  |  |  |  |  |  |  |
| Draft Final paper / GitHub repository / Kaggle uploads | | |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | |
|  |  | Done/In-progress |  | Overdue | | |  | Planned | | |

PROPOSED ‘TO DO’ FROM THE LAST WEEK (Copy & Paste from your previous week’s TO DO)

1. Complete photo processing and upload my photo’s to my Kaggle dataset. - complete
2. Start building a multi-class model for the birds. – overdue

THIS WEEK’S PROGRESS (Give bullet points and briefly explain what you accomplished or dealt with some of the milestones during the week)

* 1. I completed uploading images of Broadtailed, and Rufous females. The black chinned data that I have is not enough to have 140 images so it may be added before the end of the class, but is not likely. At this point I will have 4 classes of birds: Rufous\_female, Broadtailed\_male, Broadtailed\_female, and No\_bird.
  2. The Kaggle page is now complete, although I may add a future photo upload if enough photos are complete [2].

ISSUES AND DISCUSSION (Bring up any difficulties and things to discuss. Also, send me a reminder if you want to discuss sooner)

No issues to discuss, the data science portion of this project is going great. The classification of hummingbirds is a little frustrating. If only they would smile at the camera more. (Still true this week.)

TO DO (Give bullet points and briefly explain your plans for the next week)

We are coming down to the finish line so I will just list all of the things that need complete:

1. Create a kernel in my Kaggle dataset with a classification model for my current species.
2. Straighten up, organize, and complete my GitHub page.
3. Cleanup my code, upload cleaned code to GitHub.
4. Create final presentation.

RESOURCE (Optional: list resource or links you want to share with me)

[1] <https://github.com/amandakkimball/Hummingbird-Data-Collection-Classification>

[2] <https://www.kaggle.com/akimball002/hummingbirds-at-my-feeders>