Zhe Ren, 1002261768, EEB313

Group Project Self Assessment

For the group project, I had the pleasure of working in SEAL_TEAM_6IX with Caroline and Alex, studying decline in swallow population from the Breeding Bird Survey (BBS) data. We had a good team dynamic, everyone in the group is very friendly and respectful of each other and everyone finishes the assigned job. For each team meeting, the three of us rotated to be the leader, organizer and notetaker. Over the whole project, I was the main person keeping track of the project timeline. I ensured that the group stays on top of deadlines and has additional meetings when needed. I'm happy that the other two members are very cooperative in the plans.

Our team worked in a more independent manner, as in that members are assigned jobs at team meetings to finish on their own and communicate results at the next meeting as well as outside of meetings. However, everyone was ready to help each other for any problems they have encountered. Out of the three of us, I had the most experience with programming and especially with Github, so my focus was on "R&D" -- learning new codes, solving the more complex problems requiring either novel or complex R codes, and keeping our Github organized. I arranged the dataset for my teammates to work with, then entrusted the statistical analysis to them, only pitching in for directions of analysis during team meeting while I tackled more technically demanding problems. I'm happy that they both worked very hard on the stats part.

On the coding part, I put together the mega-dataset (with help from teammates) by combining the five datasets from BBS, then converted all the units to Celsius and summed up the vehicle data, as well as other cleanups to so that my teammates have a ready-for-use dataset. Once my teammates started working on the statistical analysis, I worked on distribution plots (or heatmaps as my teammates call them) by overlaying the abundance of swallows on a map of Ontario, with easy visualization including color and size gradient. I generated 132 .png's, then created animated MP4s using Windows Movie Maker (got the timing perfect in the meanwhile). I spent many hours trying to learn new functions (especially on 1. why read.csv didn't work properly and on 2. how to draw a map). Needless to say, I encountered the most bugs in the group and spent many hours debugging. My section took way longer than the codes suggest due to learning new functions and trying to figure out why bugs kept popping out took time.

On the Github part, since I had previous experience, I gave instructions to my teammates on how to commit, how to create pull requests, etc. early on. I found that it was unnecessary to use Git bash, so our team did not get much into it and things worked out fine. I also took the initiative to keep our Github repository clean and organized and taught them how to organize the repo, which they happily followed suit.

For the presentation and the written report, we mostly filled in the parts that we were working on ourselves. In both the presentation and the report, I explained our data source, how I generated the mega-dataset, limitations of our studies in the discussion, and of course, presented the animated distribution plots. We all put in the time in editing the final product and practicing presentation. I'm happy with the results we have as it's pretty much the best we can do with the limitations of our dataset. I am more than honored to work with Caroline and Alex!

Our Github Folder containing all that you need to see