Each group's Final Project will consist of 2 parts:

1. A **presentation**, given during class time on **December 5th.**This should be about 10 minutes in length and roughly that same number of slides or shorter. I assume you'll do it in Powerpoint, but Beamer or creating slides in RMarkdown (e.g. with xaringan) or any other software are perfectly acceptable, as well.  
     
   It should be **written for a non-statistical sports audience**(think a coach or an athletics administrator) and consist of the sections outlined below. The maximum grade on this part of the assignment is a 15, with points assigned as follows:  
     
   1. The presentation slides (10 pts)
      1. **Introduction** (2 pts):
         1. Background and motivation for the research
         2. Statement of 1+ specific research question(s) you are going to answer in your presentation
      2. **Methods** (3 pts): what was the source of the data and how did you collect and analyze it (with a medium level of detail; aim to cover this in about 3-5 minutes)?
      3. **Results** (3 pts): what did you find? Include any plots and/or tables you produced. Plots are easier for people to digest and absorb, so display data that way whenever possible.
      4. **Discussion/Conclusion** (2 pts):
         1. What did you conclude about/how did you answer your research question(s)?
         2. What are some possible limitations or flaws in your research?
         3. What do you think would be appropriate next steps or research projects?
   2. The presentation itself. Speaking duties should be divided such that everyone has a role to play (e.g. one person per section). (5 pts)
      1. Clear speaking and explanations of what is on the slides
      2. Explanations offered at appropriate level for the audience
      3. Engaging the audience; demonstrating excitement about your work
      4. Answering questions as best you can
2. A **Technical Report**, knitted to PDF in RMarkdown. This will be due by **Thursday, December 7th.**  
     
   This should be written for a **statistical audience** (that is, me or a similar analyst). The report will have the same basic structure as the presentation, but it should contain more details and information than the presentation, including all the code I would need to recreate your work on my own. Aim for around 5-10 pages with 1000-2000 words of text, but these length limits are *not*strict. If you feel you need more (or less!) to fully explain your work, that's fine.  
     
   The maximum grade on this part of the assignment will be a 25, with points assigned as follows:  
     
   1. **Executive Summary** (strict 250 words + 1 plot limit) (2 pts): summarize your report and conclusions in “layman’s terms," which I define as “a random person in line at Starbucks should be able to understand your summary.”
   2. **Introduction** (~100-500 words) (3 pts):
      1. Background and motivation for the research, including any prior work you've found done on similar topics (for the basketball group this might be a discussion of how basketball games are typically statted; for the football group this might be prior work that inspired your questions; for the recruitment group this might be a discussion of why Emory might want to know where its recruits come from or any prior work on recruiting analytics you happen to come across when designing your analysis). (1 pt)
      2. Statement of 1+ specific research question(s) you are going to answer in the report. (2 pts)
   3. **Methods** (~300-1000 words) (6 pts):
      1. What was the source of the data? How did you collect it?
      2. How did you analyze the data? Including: What statistics did you calculate, and why? What plots did you create, and why?  
           
         This should be provided with a great level of detail - more than you provided in your presentation. It should allow me to understand pretty much exactly what you did and replicate it step-by-step.
   4. **Results** (~100-300 words + an indeterminate number of plots and tables) (6 pts):
      1. What did you find?
      2. Include all statistics, plots, and other analyses necessary to answer your research question(s). Briefly explain each one and why it is relevant.
      3. Include any (final) plots and/or tables you produced. Do not include intermediate tables or plots from along the way or visualizations that ended up leading nowhere and you decided to discard.
   5. **Discussion/Conclusion** (~200-600 words) (4 pts):
      1. 1-paragraph discussion of your overall conclusions and and answer(s) to your research question(s).
      2. What are some possible limitations or flaws in your research?
      3. What do you think would be appropriate next steps or research projects?

And 4 pts for general organization and clarity. Make it as easy as possible for me to ensure you covered everything (for example by using headings to organize your report).

Your report should be organized with the 5 main headings above, but within those sections note you do NOT need to have an explicit section for each of the sub-bullets. Just make sure you cover each of them at some point in a well-organized report.

**A full submission will be a copy of your presentation as well as your Technical Report.**