**Final Project Assignment**

Please complete the following tasks using Rstudio. Then answer questions on the corresponding Lab Quiz on Canvas. You are not required to upload your R file; just submit the quiz. You will have three attempts. **Assume for assumptions tests.** **Assume for regular NHSTs**.

1. Use the dataset “Hand Function Camp Data” on Canvas
   1. Data comes from Roberts et al. (2022).
   2. These data represent metrics from a summer camp to help children dealing with paralysis to improve hand functioning. Although the data have pre- and post- outcomes, we will focus primarily on timepoint 1 (AHA.1; Melbourne.1; and Performance.1). AHA (assisting hand assessment), Melbourne, and Performance all represent different measures of what is hopefully improving for campers throughout the summer.
   3. Grouping factors of interest are Gender (male/female) and side of hemiplegia (a type of paralysis; right/left). I have also created a combined variable which you will need to use as the factor variable for the DDA post hoc (hint hint!) – GenderSide.
2. Answer the following research question from the data using analysis discussed during the semester:
   1. Do males and females who have hemiplegia on different sides show differences for AHA, Melbourne, and performance measures at the start of the summer camp?
      1. Male vs Female, Left vs Right, and interaction between the two
3. Things to consider
   1. Are my assumptions met for this analysis?
   2. Are there any missing values? (I had to delete one row of data before analysis)
   3. What analysis allows for the comparison of multiple outcomes across groups from multiple factors?
   4. How can I determine which outcomes differ on which groups?
   5. Should I interpret main effects, or the interaction effect?
   6. What effect sizes should be considered (e.g., eta-squared or Cohen’s d)?