Project 0: Is a hotdog a sandwich

Pre-Analysis Steps:

We downloaded the raw data from the Google Form output into a Jupyter Notebook. Using the pandas package, we cleaned the hotdog answer column, categorizing any answer beginning with a "Y" as "Yes" and any answer beginning with "N" as a "No". We also removed any observations with "No" to the question "Are you currently enrolled as an undergraduate or graduate student at the University of Virginia?". The other columns were left as is and could be cleaned further for later analysis.

Analysis Methods:

Initial exploratory data analysis was performed and we made a pie chart to visualize the 34 no's and 24 yes's. We also made stacked bar graphs showing the distribution of hotdog opinions by gender and academic year. We then performed a two-sided z-test for proportions to evaluate our hypothesis. Our p_hat value was 0.5 in accordance with our hypothesis. We took the absolute value of the z-statistic to perform the two-sided test.

Evaluation of Success:

Our result was a z-statistic of 1.33 which is smaller than the alpha value for a 95% test, which is 1.96. This means we will fail to reject the null hypothesis, meaning that based on our sample it is not significant enough for us to say that 50% of undergraduate students think a hot dog is not a sandwich.