* Is there a well-defined and clearly stated research question?
* Did the author provide background on the research question as to why they care and why others should also care?
* Are the hypotheses stated clearly and do they match the research question?
* Are the conditions checked in context of the data (not just a generic bullet point list of the conditions, but reasoning through them for the given dataset)?
* Are the appropriate method(s) the writer will be using stated? Did the author provide a discussion of why they chose these methods, and described how they work? Note that in this part the author should display a thorough and conceptual understanding of how the methodology works, however the write-up does not need to be as detailed as if they were teaching the method to someone with no background in statistics.
* Was the correct code used and output provided for all required techniques? See below for which situation requires which technique:

1. One numerical and one categorical variable (with only 2 levels): hypothesis test + confidence interval parameter of interest = difference between two means (theoretical or simulation)parameter of interest = difference between two medians (simulation only)
2. One numerical and one categorical variable (with more than 2 levels): hypothesis test only compare means across several groups no defined parameter of interest, ANOVA and pairwise tests (theoretical only)
3. Two categorical variables (each with only 2 levels): hypothesis test + confidence interval parameter of interest = difference between two proportions (theoretical if success-failure condition met, simulation if not)
4. Two categorical variables (either one or both with more than 2 levels): hypothesis test only compare proportions across several groups no defined parameter of interest, Chi-square test only (theoretical if expected sample size condition met, simulation if not)

* Are correct interpretations and conclusions for all output provided? Note that this portion should be evaluated based on criteria stated earlier about which technique is required when). This includes some or all of conclusions of hypothesis tests, interpretations of p-values as conditional probabilities, and interpretations of confidence intervals depending on the methods used. All interpretations must be in context of the data and the research question.
* Is whether or not results from hypothesis test and confidence interval agree stated? Or, if doing ANOVA or chi-square testing, did the author state that no other methods were applicable and hence there's nothing to compare?
* Is there a brief summary of findings that does not repeat previous statements?
* Is a discussion of what was learned about the research question provided?
* Are ideas for possible future research and/or discussion of additional synthesis or possible shortcomings of study provided?
* Is the writing clear, with few or no grammar, spelling or organization mistakes