

PSYC 4390/5090: Bayesian Statistics

Tarleton State University

Homework 4

1. Using the Big Five Personality Traits dataset in JASP, perform a Bayesian analysis of the correlation between Openness and Agreeableness. Report your results as you would if you were writing up the results for publication, using the reporting template provided in the lecture 4 video.
2. Suppose a researcher obtains a sample of size 175 and finds a correlation of $r = 0.15$, $p = 0.048$.
 - (a) Interpret this result as you would in classical inference (i.e., based on the p -value alone. Which model (\mathcal{H}_0 or \mathcal{H}_1 is supported) by this result?
 - (b) Use the JASP Summary Statistics Module to compute a Bayes factor for this correlation. Which model is supported from this analysis?
 - (c) What do you think is going on here? (Hint: google “Lindley’s paradox”)