1. Estimate both a *main effects* and *interaction effect* regression model where **extraversion (extra)** is a function of **agreeableness (agree)** and **sex (sex).** Compare the R2 of the nested models.
2. Create a 2D plot to visualize the interaction effect.
3. Calculate the simple slopes between agreeableness and extraversion for the different levels of sex.
4. Write up a brief APA style report that details your findings and your interpretations of the interaction (see example write up on next page for additional detail).

(Reminder: Steps 1-3 can all be done by completing the template R script)

**Example APA write up for moderated regression model with continuous and categorical predictors**

An interaction effects model was constructed where life satisfaction was regressed on students’ mean centered neuroticism, dummy coded sex, and their interaction term. The overall model explained a significant amount of variance in extraversion, *F*(3, 163) = 4.34, *p* = .01, *R2* = .07. There was a main effect of the neuroticism predictor on life satisfaction – increases in neuroticism scores were associated with a decrease in life satisfaction (*β* = -2.50, *p* < .01). There was not a significant mean difference between men and women on life satisfaction (*β* = -1.09, *p* = .24) nor was there an interaction effect between neuroticism and sex (*β* = 1.84, *p* = .14). The lack of interaction suggests that the strength of the effect of neuroticism on life satisfaction did not vary significantly by sex. Simple slopes analyses revealed that increases in neuroticism were associated with decreased life satisfaction for both men (*β*= -0.66, *p* = .51) and women (*β*= -2.50, *p* < .01), with the effect being slightly (but not significantly) stronger for women. Theinteraction effect is depicted in *Figure 1.*