

Common STAT 405 Errors on Homework

- Plotting
 - Over plotting
 - Too many variables
 - Not enough subsetting
 - Using small plots
 - Using gray-scales on printer to save ink/ printer running out of ink
 - Using different sized points instead facet or color or shape (esp. on a small plot)
- Curiosity
 - Using plots from class and saying that you did your HW before seeing the same plots without changing them.
 - Generalizing the behavior from one plot (e.g., behaviors are the same between different years) without looking into a second or third plot.
 - Iterations do not mean just jittering or coloring points!
- Skepticism (The hardest category to change your thinking about)
 - Begging the question & circular logic (e.g., compact cars are more efficient because they use less gas, not because of reasons 1, 2, 3)
 - Post hoc ergo propter hoc (correlation \neq causation...e.g., "We use less gas because gas is expensive/ we are going green.")
 - Accepting a proxy variable (gas = crude oil)
 - Blindly accepting premises that were found on the internet
 - Citing the wrong source
 - Jumping on the Bandwagon (e.g., "Everyone says that big diamonds are better, or Japanese cars are more fuel efficient.")
- Organization
 - Not including a heading, introduction, section headings, conclusion.
 - No flow in between questions/sections.
 - Phrasing questions as a tautology (e.g., "Why do guzzlers use lots of gas?")
 - Conclusion reaffirms the premises even though your data doesn't.
 - Concluding by restating the findings (without some takeaway)