

## STAT 541 --- Spring 2021 Graduate Student Project.

*This project is required for graduate students in STAT 541. Undergraduates may do this project for extra credit.*

**Option 1:** For this project, you will come up with a “programming task” or “assignment” that you might give if you were teaching this class, or directing a SAS programmer in a work environment. The assignment should involve an SAS programming problem based on topics we study in this class (more basic topics from STAT 540 may also be involved, but a substantial portion of the task should relate to STAT 541 material). The task may involve data from your work, from your area of study, or simply related to an outside interest of yours.

You must turn in a careful description of the assignment along with any supplementary materials, data files, or hints necessary to help accomplish the assignment. You must also turn in a complete, correct solution to the assignment, with full explanatory comments (using proper SAS commenting style) for your solution code.

You have a great deal of leeway about what type of assignment you make up, but the best “assignments” will require a bit of creativity in programming, rather than straightforward applications of a simple method we learned. In general, an “assignment” that is very simple and straightforward will not receive as high a grade as one that is creative and a bit challenging (of course, you need to provide a correct solution for your “assignment”, so don’t make it impossible!). Have fun!

**Option 2:** Alternatively, you can choose to mimic one (or more) of the data visualizations in SAS that are on Robert Allison’s incredible SAS graphics website at:  
<http://robslink.com/SAS/>

For this, you would imitate the SAS code to produce one (or more) of Allison’s graphs, but you would have to do this on your own data set of interest. This would involve your carefully reading and understanding Allison’s code, so that you could apply it to your own data set. This may be quite challenging for some of the examples, but could be very educational as well. Your comments would have to carefully explain the code and also the purpose of the graph and the conclusions that can be drawn from it.

The project will be graded out of 10 points. For graduate students, the project will represent 5% of the overall course grade. For undergraduate students, any earned points on the project would be extra credit added to your Test 3 score.

The project will be due on or before Tuesday, April 20 by 4 p.m. The code and comments can be uploaded into Blackboard as a plain text (.txt) file as usual. The description and any necessary supplementary materials can be uploaded separately, or if it is not possible to do so, then you can email it to me.