My alternative proposal is an apparently novel (?) approach to computing standardized coefficients for LM and GLM models - that is model coefficients that describe a model in terms of standardized variables. Most students are taught a formula that works for first order terms, and most software treats higher order terms as if they are first order terms. The usual approach in practice for higher order terms is to transform the data, then estimate a model. My approach takes the model, plus means and standard deviations of the predictor variables, and constructs standardized coefficients (and their vcov) directly. The method arises out of the mathematics of tensors, and is actually pretty simple.

Goal:

1. Implement the mathematical core in Julia and R. We need to consider (a) interaction terms, (b) polynomial terms, (c) indicator/unstandardized terms as part of interactions.

I would build a function in Stata or R, just because I am not sure how far I can get extracting variable types and polynomial order in Julia by December.