

Project Outline and Expectations

STSCI 4110 Categorical Data Analysis, Spring 2019

Prelim 2 Take Home Project

Your project report should include the following five sections:

- Executive Summary
 - Research question is clear, results are summarized, conclusion is present.
 - Indicate important variables and the direction of their effects.
- Introduction
 - Brief information about why the research question is important
 - Description of overall analysis strategy
- Description of Subjects
 - How data were checked and cleaned
 - Description of characteristics of subjects (percentages for categ variables and outcome variable, medians/stdev/min/max for numerical variables)
- Results
 - Univariate contingency analysis of variables (one at a time) and their association with outcome variable
 - Exploration and choice of the best scale for every significant, numerical explanatory variable (include at least one “slicing-dicing” plot (of empirical probabilities)
 - Multivariable analysis using logistic model
 - Selection of significant covariates, with best scale (“transformation”) for each.
 - Description of the process in fitting the best model. (Don’t need to present all hypotheses tests done or the specific details of each step. Describe the overall methods used and steps taken.)
 - Consideration of interactions (no more than two-way) and possible rescaling of variables
 - Final model is written in general form, with description of coding for each variable in the model.
 - Table is created with parameter estimates, odds ratios, odds ratio confidence intervals, p-value for each variable in the final model
 - Strength and direction of effect of each variable in the final model is described.
 - Assessment of the overall goodness-of-fit of the model (use at least two methods of evaluation)
 - Success probabilities of representative sub-populations are described, with tables and figures, as appropriate. (Be sure your R code submission has this portion of code, so that I can check for correctness.)
- Discussion
 - Answers the three main questions outlined in the Prelim 2 assignment description
 - Clearly states conclusions about the effects (and direction of effects) of the variables
 - Analyzes the relative importance of predictors
 - Discussion of problems encountered during the analysis (if any)
 - Possible avenues for further research on the subject are mentioned

Overall Writing and Style

- Correct grammar and spelling
- Data/figures
 - Meaningful units are used and included
 - Graphs are of the appropriate type and are labeled accurately
- Paper is logically organized and easy to follow
- Paper is concise – unnecessary or irrelevant information is not added

Page Limit for Report: 12 pages

R Code: Submit in a different file than the report.