Comments On Assignment Objectives

PREDICT 410

High Level Objectives

- Re-enforce the weekly concepts and their reading – Quizzes
- Get hands on experience with data – Modeling Assignments
  - Data organization
  - Data munging and exploratory data analysis
  - Fitting and evaluating models
  - Introduce statistical software – SAS or R
  - Becoming an intelligent user of statistical software
- Re-enforce the ‘numbers’ of regression – High School Math Assignments
  - Compute quantities like t-statistics, R-Squared, Adjusted R-Squared, AIC, BIC, and the Overall F-test.
- Develop ‘personal precision’
  - Students need to become more efficient and precise in their study and execution.

Quizzes

- Designed to re-enforce concepts, especially concepts that are frequently mis-understood by students.
- Open book and untimed – except for the Bonus Quiz
- Suggestion – Look at the quiz questions. Complete the reading. Review the reading through the open book quiz.
- Quizzes are multiple choice. The correct answer to a multiple choice question is the 'best' answer.

Modeling Assignments

- Get hands on experience cleaning data, making statistical plots, fitting statistical models, validating statistical models, and interpreting statistical models.
- Understand that there is no 'correct model'. There are only better models. Identify a 'better' model and explain why it is better than the other model choices.
- Learn to write reports – Part I. Modelers write reports. In any work environment production grade models need to be properly documented, that means that you need to write a model development document.
- Learn to write reports – Part II. Demonstrate that you understand the model output by articulating that understanding through your report.

Build a Foundation of Concepts

- Understand the statistical assumptions underlying our statistical models.
- Understand how to interpret the statistical inference associated with our statistical models.
- Understand the differences between models for statistical inference and predictive modeling.
- Understand how to evaluate a model within the context of its application.
- Understand how to interpret model output.
- Understand how regression model output is computed.

Develop Personal Precision

- Many students enter Predict 410 without proper study habits or attention to detail. The Predict 410 course design will help you develop better study habits and attention to detail.
- Develop independence – data scientists are expected to work independently with minimal supervision.
- Attention to Detail – data scientists are expected to do it correctly the first time.
- Problem Solving – data scientists provide solutions.
  - Data scientists need to define statistical/modeling problems from ill-defined business objectives.
  - Data scientists need to understand the quality of their solution. Some applications need more accurate solutions than others.

Closing Remarks

Predict 410 is part of the MSPA curriculum, and the beginning of the modeling sequence. 10 weeks is not a lot of time. In those 10 weeks we will balance course objectives and program objectives, but it is not our responsibility to cover everything in Predict 410. Some of our general concepts will be continued through the courses Predict 411 and Predict 422, and Predict 454 if you choose to take that course as an elective.

Try not to get ahead of yourself. Focus on the material that we are scheduled to cover.