



BUA6110-1: Predictive & Prescriptive Analytics

Instructor:

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Final Project

In the final project, you will have an opportunity to apply the techniques and their applications you learned in class to some real-world problems. I strongly encourage you to start planning your final project early and discuss with your employer and the instructor if you have any questions.

Instructions and Deliverable

- You need to consider one of the following 2 types of predictive objectives:
 - A linear response
 - A binary response
- Procure data related to the problems described above for your project. You can find sample data sources can be found in the link below but you are not limited to the sample data in the site. You can use real data from work or other sources, as long as there's no PII included in the data. Try to select data sources large enough for training and validation purposes.

Example: <http://archive.ics.uci.edu/ml/>
- Apply appropriate predictive modeling technique to the data you procure
- Evaluate and compare model outcomes based on various criteria you learned from the class to select your recommended model outcomes. Specify which goodness of fit criterion(a) you choose for model evaluation. For example -
 - All predictors in the model are significant with acceptable p-value
 - All predictors in the model have consistent sign (i.e., direction of impact on the dependent variables) in the univariate and multivariate modeling environment
 - R^2 , mean square of error, pseudo R^2 , Hosmer-Lemeshow Test, ROC, K-fold validation, or training-validation sample lift consistency, etc.
- Provide interpretation of model results. For example
 - Accuracy of the model
 - Drivers of the dependent (or target) variables and what they mean

- **Final project deliverables** - Submit a written report including the following components -
 - Background and objectives
 - Description of data used for the project
 - Statistical methodology
 - Model Results, including final model equations and goodness of fit, and model lift charts.
 - Key learning and implications