

ISOM 2600: Introduction to Business Analytics

FALL , 2020

Department of Information Systems,
Business Statistics and Operation Management

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Class meets:

Course Description

Main Contents:

- This course introduces basic and modern analytical concepts and methods for the business practice. It covers statistical tools in descriptive analytics and predictive analytics, including multiple linear regression, classification and clustering. This course provides students with the fundamental concepts and tools needed to understand the emerging role of business analytics in organizations and shows students how to apply basic business analytics tools, and how to communicate with analytics professionals to effectively use and interpret analytic models and results for making better business decision. Emphasis is placed on applications, concepts and interpretation of results, rather than theory and calculations.

Objectives:

- To gain an understanding of how managers use business analytics to formulate and solve business problems and to support managerial decision making.
- To select and apply appropriate statistical models in the analysis of quantitative and qualitative data from a variety of business scenarios.
- To learn how to solve business problems by statistical modelling and analysis.

Course Materials

- A. Reference textbook: “Python Data Science Handbook” authored by Jake Vanderplas ;
- B. Class notes and exercise questions are downloadable from course website (<http://canvas.ust.hk/>).

Evaluation

Your overall grade will be based on the following:

- A. 4 assignments (40%): Students are allowed to work individually or in group (group size ≤ 3). All are required to submit on canvas.
- B. Final Exam(60%):

Course Organization

- **Part I:Regression Analysis**
 - Multiple Linear Regression Model
 - Regression for Nonlinear Pattern
 - Variable Selection

Assignment I, and II

- **Part II: Classification Analysis**
 - Evaluation of Performance
 - K-Nearest Neighbor Method

- Naive Bayesian Classifier
- Logistic Regression Model

Assignment III

- **Part III: Clustering Analysis**
 - K-Means clustering
 - Hierarchical clustering

Assignment IV

Final Exam

Grievance Procedure

If you disagree with grades that have been assigned to your work, you have the possibility to meet instructors within one week after the grades have been published on the course website. Be specific about what it is that you don't agree with.

Academic Integrity

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of other groups, or tampering with the academic work of other groups. All exam answers must be your own, and you must not provide any assistance to other students during exams.