MKTG 3597:
Marketing Analytics

Xiaojing Dong

What's already shared

- Google Drive
- Course project

Content

- Introduction to the course
  - Why Marketing Analytics?
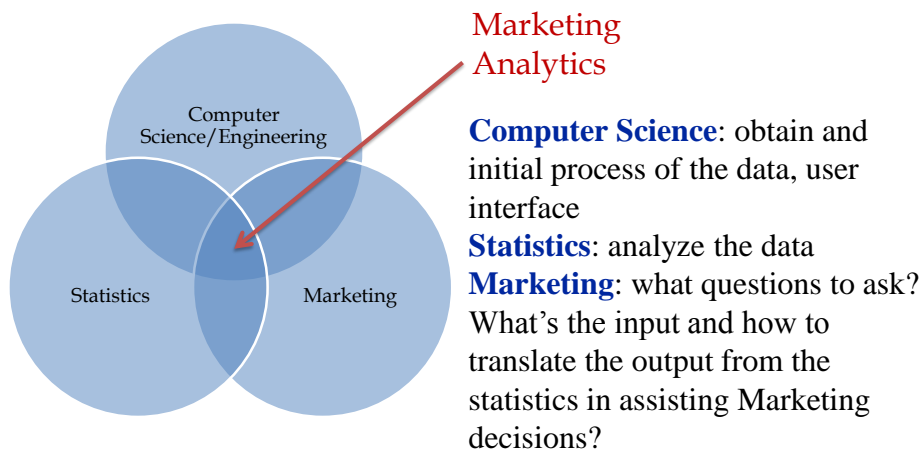 - Topics to be covered in this course

About the Instructor

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- Office: Lucas 321C
- Office hours:
  - Saturdays 2:45-3:45pm (emailing ahead of time is recommended)
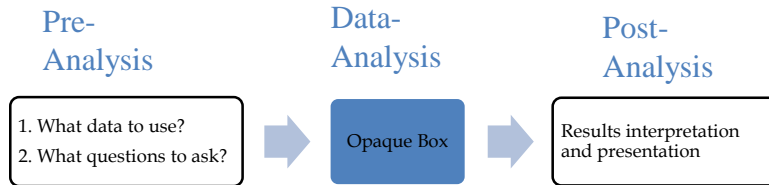 - By appointments

The Instructor

- Research areas
  - Pharmaceutical Marketing
  - High-tech
  - Retail
  - Digital Marketing
  - Marketing Attribution
  - Direct Marketing, CRM, ROI, Sales Forecasting, New Product, Customer level modeling, etc.

What is Marketing Analytics

Marketing
Analytics

Computer
Science/Engineering

Statistics

Marketing

Computer Science: obtain and initial process of the data, user interface
Statistics: analyze the data
Marketing: what questions to ask? What's the input and how to translate the output from the statistics in assisting Marketing decisions?

Marketing Analytics

Pre-Analysis	Data-Analysis	Post-Analysis
1. What data to use? 2. What questions to ask?	Opaque Box	Results interpretation and presentation

- Important to know
  - Data generation process
  - Business environment
  - Assumptions made in the model
  - Components missing in the model
  - Intuitions behind the model and results
  - Limitations of the model and the software

Two Types of Data Analysis

- Describe the data and focus on the pattern
  - Only need X variables
  - E.g. clustering analysis, factor analysis

- Focus on the reasons influencing the outcome variables
  - Need both Y (outcome variables) and X variables
  - E.g. Classification analysis, regression models, Logit models, Bass model

Topics to Cover in This Course

- Marketing mix modeling – **Regression analysis**
- Segmentation and targeting – **Clustering and discriminant analysis** (variance)
- Positioning – **Factor analysis** (correlation)
- Sales forecasting – **Bass forecasting model** (PDF and CDF)
- Experimental Design– **Bayes theorem**
- Direct marketing in CRM – **Binary Logit model**
- Competitive Analysis – **Multinomial Logit model**
- Other topics, time permitted

Types of Data

- Primary data:
  - Survey data
    - Use for STP, Conjoint
- Secondary data:
  - Individual customer level data – Panel Data
    - Transaction data – customer purchases records,
    - Customer activity data – click stream data
    - Marketing data – promotions, events, etc.
    - Demographic data – any information about your customer
  - Aggregate level data: e.g. sales data over time
    - Discover trend, Bass Model, Sales forecasting model

Homework/Tests

- Homework
  - Individual work, submit **hardcopy**
  - Due almost every week before class

- Tests
  - One quiz to get you familiarize with the exam format
  - One midterm exam: in class Saturday, November 11.

Your Grades

Class Participation & Quiz	20%
Homework:	25%
Team Project:	25%
Midterm Exam:	30%