Course: BAN 5561

‘Customer Lifetime Value Models in Marketing Analytics’

Course Objectives: This course has three main objectives.

- Students will understand the concepts and financial calculations associated with implementing Customer Lifetime Value methodology.
- Students will be able to build predictive models that are commonly used in Customer Lifetime Value methodology.
- Students will be able to apply analytical reasoning to evaluate Customer Lifetime Value output, and apply business & marketing acumen so as to understand and recommend what actions should be taken as a result.

Course Description: The primary purpose of this course is to introduce students to the mathematical, predictive modeling, financial, and business/marketing concepts associated with implementing Customer Lifetime Value (CLV) methodology. The course will cover the financial concepts and mathematical formulae for CLV calculations. The course will cover the most common approaches to building the predictive models required for projecting future value. The usage of Python for building these models will be a focus for this course. Perhaps most importantly, beyond the technical aspects of implementing CLV, this course will focus on interpretation of CLV output and best practices for using CLV to improve business decisions and marketing strategies.

Course Format: 1.5 days of in-person classroom sessions, followed by 0.5 day online session. For the Fall 2019 schedule, this will be:

Saturday, October 12 --- classroom, 9:00am to 5:00pm;
Sunday, October 13 --- classroom, 10:00am to 2:00pm;
Saturday, October 19 --- online, 9:00am to 1:00pm.

Course Prerequisites: Students are required to have a good understanding of various analytical techniques including (but not limited to): Regression (Linear & Logistic), Clustering, and Decision Trees. At least some prior experience with Jupyter Notebook and Python is required. Experience with “discounted future cash flow” calculations is beneficial, but not required.

Course Pre-Work Required:

Self-introduction. One-paragraph, summary of who you are, what is your educational background, and why you are interested in learning about CLV. Submit your self-introduction via the class site (https://online.okstate.edu/) no later than 4:59pm on the day before the first day of class, in the Dropbox. The course site will be accessible one week prior to the first day of class.

Read 3 particular whitepapers on CLV prior to the first day of class:

CLV Paper 2: wp_3454.pdf on the Content section of our course site.
CLV Paper 3: Please access this paper via the OSU library link below:

Practice Prize Report--The Power of CLV: Managing Customer Lifetime Value at IBM
If you are unable to access CLV Paper 3 from this link, please go to OSU’s library website (http://www.library.okstate.edu/) – type in the article name in the search box and get a direct link.

If you are unable to locate any of these papers, please contact the instructor immediately, as failure to access and read these papers would negatively impact your grade.

**CLV Insights & Questions.** Prior to the first day of class, students are required to take notes (just a bullet points) on their insights and any questions that come to mind, after reading the 3 whitepapers, above. Students are required to submit these notes via the class site (in the Dropbox) for this course, **no later than 4:59pm on the day before the first day of class.** Come prepared to discuss your CLV insights & questions. These should be in the form of just a few bullet points.

**Install Anaconda on your laptop.** Prior to the first day of class, students are required to install Anaconda on their laptop. Details on this have been sent to students via email. If you have any issues or questions about this, be certain to get this resolved and completed before the first day of class.

**Course Outline:**

Pre-work (to be completed prior to the first day of class):
- Self-introduction (submit in the Dropbox)
- Read 3 particular whitepapers (above)
- CLV Insights & Questions (submit in the Dropbox)
- Install Anaconda on your laptop

Saturday morning:
- Syllabus Review
- Class discussion on course pre-work (CLV Notes)
- Lecture – Overview of CLV; technical review and business applications.
- Hands-on Lab – Data Prep.

Saturday afternoon:
- Lecture – Churn modeling.
- Hands-on Lab – Churn modeling.
- Lecture – Margin projections.
- Hands-on Lab – Margin projections.

Sunday:
- Lecture – CLV calculations, implementation, output, outcomes.
- Hands-on Lab – CLV calculations & output.
- Lecture – CLV segmentation, potential value, business application.
- Form project teams.
- Review Team Project assignment, deliverables, and timeline.
- Open Discussion on CLV

Between classroom portion and online portion, there will be an online Quiz.

Between classroom portion and online portion, there will be team project work.
Course Outline (continued):

Online session (October 19, 9:00am to 1:00pm central time zone):
Team Project presentations & discussion.

**Grading Criteria:**

- **Self-introduction**: 25 pts (due before the 1st day of class)
- **CLV Insights & Questions**: 25 pts (discussing pre-work bullet points)
- **Hands-on Lab work**: 150 pts
- **Quiz**: 50 pts
- **Team Project**: 250 pts

Letter grades will be assigned according to the standard scale:
90% = A, 80% = B, 70% = C, 60% = D, Below 50% = F

Final grades may be based on normalizing the distribution of total points.

**About the Instructor:** David Ogden has over 25 years of experience in statistical analysis and predictive modeling. Mr. Ogden’s business experience has spanned operations & financial analysis, database marketing, acquisition & retention investment strategy; with a specialization in Customer Lifetime Value methodology. Mr. Ogden has designed solutions in a diverse range of industries including retail (traditional and online), telecom, health sciences, oil & gas, non-profit, satellite television, insurance, and financial services. His analytical solutions assist customers with business challenges focusing on a variety of data mining and predictive modeling applications, including: early warning systems, strategic cost & revenue management, long-range economic modeling, process improvements, marketing optimization, scenario analysis, demand forecasting, and text mining. Prior to his consulting and corporate experience, Mr. Ogden taught college mathematics and statistics. Before his university life, Mr. Ogden was a baker.

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If you have problems accessing the class site, please contact OSU’s IT help desk at 405-744-4357 or 1-877-951-4836, or email at helpdesk@okstate.edu.