SMU Cox School of Business
MAST 6252: Applied Probability Models
Reading List

This document outlines the required, recommended, and optional readings for the course. If a reading is flagged as required, interpret that as "the professor thinks that reading this will make it easier for me to learn the material that was covered in class." In fact, some of the required readings give you step-by-step instructions on how to build certain models. Some of the recommended and optional readings do the same thing, but they are not required because they are written at a technical level that is above that of the class prerequisites. Recommended readings are either somewhat easier, or somewhat more important, than the optional readings. You may find that reading the introductions of the recommended or optional papers, studying the motivating problems, and trying to follow along as much as you can, is a good learning exercise. The other kind of recommended or optional reading is one that illustrates an interesting, practical application of a particular model.

Week 1: Modeling Customer Retention

Required

- P. S. Fader and B. G. S. Hardie (2007). "How to Project Customer Retention." *Journal of Interactive Marketing*, 21(1):76–90.
- Note on Fader and Hardie (2007)
- Note: An Introduction to Probability Models and Maximum Likelihood Estimation

Recommended

- K. L. Lee et al. (2007). "How to Project Patient Persistency." *Foresight*, (8):31–35.

Week 2: Customer Lifetime Value

Required

- P. S. Fader and B. G. S. Hardie (2010). "Customer-Base Valuation in a Contractual Setting: The Perils of Ignoring Heterogeneity." *Marketing Science*, 29(1):85–93.

Recommended

- Technical appendix for Fader and Hardie (2009) "Perils" paper

Week 3: Bayesian Inference and Customer Targeting

Required

- Note on Conditional Probability and Bayes' Theorem
- D. G. Morrison and M. U. Kalwani (1993). "The Best NFL Field Goal Kickers: Are They Lucky or Good?" *Chance*, 6(3):30–37.

Recommended

- M. Richey and P. Zorn (2005). "Basketball, Beta and Bayes." *Mathematics Magazine*, 78(5): 354–367.
- D. J. Sabavala and D. G. Morrison (1977). "A Model of TV Show Loyalty." *Journal of Advertising Research*, 17(6): 35–43.

Optional

- R. A. Colombo and D. G. Morrison (1988). "Blacklisting Social Science Departments with Poor Ph.D. Submission Rates." *Management Science*, 34(6): 696–706.
- V. G. Morwitz and D. C. Schmittlein (1998). "Testing New Direct Marketing Offerings: The Interplay of Management Judgment and Statistical Models." *Management Science*, 44(5): 610–628.

Week 4: Customer-based Valuation for Non-contractual Businesses

Required

- P. S. Fader et al. (2010). "Customer-Base Analysis in a Discrete-Time Noncontractual Setting." *Marketing Science*, 29(6): 1086–1108.
- P. S. Fader and B. G. S. Hardie (2009). "Probability Models for Customer Base Analysis." *Journal of Interactive Marketing*, 23(1): 61–69.

Recommended

- D. McCarthy et al. (2018). "The Normalizing Constant in the BG/BB Model". Research paper 18-33. SMU Cox School of Business. SSRN:3241680.
- P. S. Fader et al. (2006). "More Than Meets the Eye." *Marketing Research*: 8–14.

Week 5: Counting Models

Required

- Note on Modeling Count Data

Optional

- D. G. Morrison and D. C. Schmittlein (1988). "Generalizing the NBD Model for Customer Purchases: What are the Implications and is it Worth the Effort?" *Journal of Business and Economic Statistics*, 6(2): 145–159.
- A. Lyall et al. (2002). "Four Week Radio Survey." In: *Excellence in International Research 2002*. Amsterdam: ESOMAR. 221–242.
- R. D. Clarke (1946). "An Application of the Poisson Distribution." *Journal of the Institute of Actuaries*, 72(3): 481.

Week 6: Timing Models

Recommended

- P. S. Fader et al. (2003). "Forecasting New Product Trial in a Controlled Test Market Environment." *Journal of Forecasting*, 22(5): 391–410.

- S. Gupta and D. G. Morrison (1991). "Estimating Heterogeneity in Consumers' Purchase Rates." *Marketing Science*, 10(3): 264–269.
- Hardie (1999) Note on the Interplay between Timing and Counting Processes

Optional

- D. G. Morrison and D. C. Schmittlein (1980). "Jobs, Strikes and Wars: Probability Models for Duration." *Organizational Behavior and Human Decision Processes*, 25(2): 224–251.
- K. S. Lomax (1954). "Business Failures: Another Example of the Analysis of Failure Data." *Journal of the American Statistical Association*, 49(268): 847–852.
- D. A. Redelmeier and S. M. Singh (2001). "Survival in Academy Award-Winning Actors and Actresses." *Annals of Internal Medicine*, 134(10): 955–962.