MGMT 687 AI For Business Decision

Fall 2024

Team Project Option A:
Dunnhumby

This is an opportunity for you and your teammates to apply the knowledge and skills learned in this course to a real business problem.

Description:

Competitor analysis is a crucial element in marketing as it provides insights into a company's position in the market, helping guide strategic decisions. By understanding competitors' strengths, weaknesses, market positioning, and consumer perceptions, companies can better identify their own opportunities and threats, ultimately refining their value propositions. Typical competitor analytics involve tracking market share, analyzing pricing strategies, and assessing product features. Firms also perform sentiment analysis on consumer reviews and use social listening tools to gauge customer feedback across platforms. Additionally, assessing competitors' advertising spending, SEO performance, and keyword targeting provides insights into digital strategies, allowing firms to refine their own campaigns and enhance customer acquisition.

In this group project, please select a focal brand from a specific product category and conduct a competitor analysis using the provided dataset. Choose several key competitors of the focal brand to analyze. Some typical questions you may explore include:

1. Predict the sales or market share of competitors;
2. Forecast competitors' pricing strategies and examine how these pricing changes may impact on the sales of the focal brand;
3. Analyze the occurrence of competitors' marketing campaigns and assess how these campaigns affect the focal brand's sales;
4. Investigate how the insights from questions 1 to 3 might vary across different seasons or types of competitors (considering factors such as market share, brand equity, or price level).

Your analyses should draw on the knowledge and skills you learned in this course and other related courses. As you explore, analyze, and solve the problem you have chosen, you should feel free to search online and offline sources for information, and read articles and research papers that may give you insights into the problem.

The goal of the project is to give you hands-on experience in executing a real project. You and your teammates will go through the whole iterative process of problem identification, data collection, data exploration, model specification, data analyses, model evaluation and testing, result interpretation, and presentation. Your project will be evaluated based on how interesting, relevant, and novel the topic is, the correctness and depth of your analyses, and the quality of your presentation and your slides.

Due Date and Deliverables:

Each team will deliver its findings via a presentation and a deck of slides. The presentation will run 15-20 minutes. Each team will record a presentation video and put it online for other teams to watch and critique. <u>The presentation video and slides are due on December 5.</u>

Each team should prepare a deck of slides. 10-15 slides will be used for presentation, and 10-15 additional backup slides will used to provide more background information. This deck of slides may include the following information:

1. Executive summary of your findings and conclusions;
2. A brief description of the business problem;
3. A brief description of the data source and some summary statistics;
4. A brief description of the models you have built and the model you have selected and their performance;
5. A description of the results, how the results should be interpreted, and the robustness of the results;
6. Implications of your results and findings for businesses, competitors, and markets;
7. References, including relevant articles and papers you have read (with web links as appropriate).

Submission:

Please make sure to follow the steps below:

1. Upload your presentation video to the "Team Project Video Share" discussion forum under "Team Project"; Each group needs to start a thread with the title "Team [Number] Presentation Video" and upload your video.

2. Submit the PowerPoint presentation in response to this assignment; make sure to name the file "Team [Number] Slides".