Saunders College of Business - Rochester Institute of Technology

Annual Business Analytics Competition Spring 2021

In the contemporary business world, both technical insight and business acumen are critical characteristics of successful business leaders. It is no surprise that companies are increasingly looking for graduates who master and demonstrate their analytical acuity as well as a deep understanding of how businesses operate in a competitive environment.

To help students prepare for this competitive marketplace, the Saunders College of Business presents the Inaugural Business Analytics Competition, Spring 2021 that aims to bring together students from diverse backgrounds and skill levels to solve complex and meaningful business problems.

Scenario

BAC Inc. is a pharmaceutical company headquartered in New York City. Amidst the Covid-19 pandemic, the company has experienced a boom in sales and is planning to expand its operations. Among the different locations under consideration, the Greater Rochester region, with its affordable living costs and growing population, has become an attractive potential destination for BAC's expansion efforts.

BAC Inc. has hired your team of consultants to help them assess an entry to the Rochester market and advise BAC on potential partnerships in the local area. Specifically, the company has asked your team to advice it on two specific objectives:
1. What factors drive the success of existing pharmacy stores in the areas and predict future success?
2. Based on the evaluation of existing pharmacy stores:
    a. Should BAC Inc. buy an existing and struggling store to deliver its products? If so, which store would be worth considering and what changes should be made for the store to succeed? (e.g., product mix, vendor selection, pricing)
    b. Alternatively, should BAC Inc. build a new store (if so, where) and come up with an attractive product portfolio for the Rochester market? In addition, the CEO has communicated to your team that the company can only afford to handle a maximum product mix of 500 items for the Rochester area.

Data

To help your team, BAC Inc. has obtained the following datasets:
1. A dataset containing sales information for major pharmacy stores in the Rochester area ("pharmacy sales.csv")
2. A complete list of pharmacy stores in the Rochester area ("pharmacy in ROC.csv")

In addition, the CEO has suggested that the team look for zipcode demographics data from other sources such as:
1. https://www.zipdatamaps.com/monroe-ny-county-zipcodes
2. https://www.homefacts.com/demographics/New-York/Monroe-County/Pittsford/14534.html?searched=1

Task

Your team is asked to provide a summary report of no more than four pages (single spaced A4 size with 1" margin; excluding associated figures, visualizations, or tables, see description of appendix section below) that communicates the recommendations to the BAC's Board of Directors. The report should contain the following elements:
1. A cover page with names of team members and contact information for the team leader. The cover page is not counted toward the page limit.
2. An executive summary of key findings and recommendations.
3. A data preparation section that outlines the handling of data as well as providing details of any additional data used.
4. A data analysis section that reports the techniques and methodologies used by the team
5. A results section that explains the findings and provides interpretations and recommendations for the Board of Directors.
6. An appendix section that contains any details the team wishes to clarify (e.g., visualizations). As noted above, the appendix section is excluded from the page limit.

All accompanying files should be submitted together with the report (e.g., Tableau files, R/Python codes, etc.).

Procedures to Participate

1. Interested students should gain access to the competition course shell "Business Analytics Competition @ RIT" (https://mycourses.rit.edu/d2l/home/914331). To gain access to the course shell, please send an email request to Prof. Bui (qnbbbu@rit.edu) or Prof. Perotti (vjpbbu@rit.edu).
2. Students should form their own teams. Each team should have no more than **five members**. Team members may be either undergraduate or graduate students, but not PhD students. They must be current students participating in an academic program at

RIT at the beginning of the competition. (Students who graduate by the end of the Spring 2021 semester still can participate.)
3. Participating teams can submit their summary reports using the MyCourses course shell. The deadline for submission is **May 26, 2021 at 11:59pm EST.** Teams can submit as many times as they wish, but only the last submission will be used for evaluation. Late submissions will not be considered.
4. Names and contacts of team members should be included in the cover page of the submission. The main contact student for the team should be noted in the list. If not, the submitting student will be assumed as the main contact student.
5. The discussion board in MyCourses course shell will serve as a forum for questions and answers that students may have during the course of the competition. Students are encouraged to check the discussion board and post their questions there.

Evaluation

In the first round, each submission will be judged by a panel of instructors. The panel will assess the quality of each submission on the following dimensions:
1. **Technical accuracy and sophistication** - Does the technical work build confidence in the insights and recommendations?
2. **Business logic and implied reasoning** - Do the findings demonstrate an understanding of how the data contributes to the business decisions?
3. **Report coherency, narrative flow, and professionalism** - Does the summary report clearly communicate both the technical and business thinking to persuade an audience of BAC executives?

Based on the summary report evaluation, the top 4-5 teams will be invited to participate in the second round of the competition. In the second round, each team will be given 15-20 minutes to present their findings to a panel of industry practitioners. The panel will select the top three teams as the prize winners for this competition.