Business Analytics

PROJECT 1: DESCRIPTIVE ANALYTICS

SPRING 2020

The following case reflects some work completed by the data analytics team at Element451. As such they are used for educational purposes, to teach the challenges of data curation, integration, and insight generation. Data has been anonymized but participants cannot share data sources outside the scope of this class.

Use Case 1: Email Engagement Analysis

Data: https://drive.google.com/drive/folders/1zy09BcUY3rbaulCS7rsCsgpE-xpJvMAx

Your university is trying to answer questions on email engagement. The school is worried about the perception of email spam, and want to reduce the number of emails sent to students.

To focus on email engagement means that you are looking at how students interact with emails from a school. For example, do they:

- Open the email?
- Read the content?
- Click on links?
- Follow a call to action?

For this project and data analysis, your team needs to answer the following questions:

- What is the average number of emails that are being sent per student?
- What is the average open rate per student?
- How many students (count and %) are ***not*** opening emails?
- How many emails does it take (number of delivered) to get students to open an email?
- Among students who unsubscribed (emailUnsubscribed), how many emails on average were they sent?
- How does email engagement change over the course of enrollment milestones (Prospects→ Applicants→ Admitted)
- What other actions students complete as they advanced their milestones (Prospects→ Applicants→ Admitted)

- Are there “windows” where applicants/deposited students complete more actions? For example, an admitted student opens 10 emails in 12 weeks, but 50% of them during the 1st week.
- Compute an “engagement score” that combines the actions that lead to higher conversion. The “engagement score” is a weighted average from 0-100% that accounts for different actions completed by an student.

Submission, Deliverables, & Grading

Project is due in class and defended on February 25th. Each team will submit slides in NYUClasses and provide a 7-10 minute presentation followed by a 5 minute Q&A. Team should seek to answer the following questions when presenting:

- Overview of the problem - what is the problem you are trying to solve. How is this analysis relevant to your client
- Overview of data: what was the final dataset used for the analysis?
- Analysis & Results: review of techniques used and results from analysis. What patterns emerged from the data? Are there any anomalies in your use case? What associations emerged?
- Insights: visualize your primary findings in an executive dashboard. The dashboard is the “take away” from the presentation. Basically, the client will take the dashboard to review the analysis you presented. (HINT: The analysis above includes primary and secondary findings. The dashboard is an executive report, thus it should only have a subset of your primary findings)

Grading will be based on the following:

- Quality of presentation - 20%
- Quality of analysis - 50%
- Relevance of insights generated - 30%