Project Summary

Team: 13-Sun-Devils-2
Team Members: Amrit Singh Johal, Jeff Mathew, Roshan Ramakrishnan, Meshach Samuel, Jason Rubio

Primary questions:
1. Finding Student Engagement and correlating it with an understanding of the material within the course.
2. How did Student's EOC change as their engagement time and the number of times they retried a quiz varied?

General goal:
- Determining how many students feel confident about their ability to complete the course with a decent to high comprehension
- Determine how well the students did on their tests by retrying the quiz as many times as they needed

Methods used:
Heatmaps, Scatterplot, Bar Chart, Tableau, Python

Main Findings:
1. Students tend to be engaged between 3.5 minutes to 8.9 minutes. There was an outlier with 6 students spending 19 minutes and 15 New Attempts
2. Students used as many attempts as they need, re-attempting from 0 to 15 times
3. The 3 highest average scores were:
    a. 0.8025 when students used 9 re-attempts and were engaged for 7.02 minutes
    b. 0.7175 when students used 12 re-attempts and were engaged for 3.47 minutes
    c. 0.7040 when students used 4 re-attempts and were engaged for 8.79 minutes
4. The 3 lowest average scores were:
    a. 0.5268 when students used 7 re-attempts and were engaged for 8.90 minutes
    b. 0.5546 when students used 10 re-attempts and were engaged for 5.72 minutes
    c. 0.5944 when students used 5 re-attempts and were engaged for 6.02 minutes
5. Graph doesn't show how many students used how many re-attempts
6. 2nd graph shows that 13,413 students did not re-attempt the quiz. Only 1,430 students used a re-attempt. Numbers for more re-attempts drops even further, suggesting that students are more likely to not use another attempt or only use 1 extra re-attempt. This could suggest that:
    a. Students were already happy with the score they got for that quiz.
    b. There were too many questions for the students to try to re-attempt to quiz more than 1 time.
    c. The questions were too hard for the students to be bothered to re-try the quizzes
7. Book: Advanced Statistics and Data Science (ABC) - v5.1.1 was the most liked.
8. D: 4 chapters (multivariable models, factorial ANOVA, ANCOVA and multiple regression)