**Analysis:** We will conduct a comprehensive analysis after we compare the performance of apis using the dataset and statistical analysis. we plan to do three data anaylses

* Multivariate Regression with User Count:

(a)Understand how user count affects API performance(e.g., error rate, average response time, throughput).

(b)Determine which API handles varying user loads more effectively.

* Comparative EDA Analysis of Two APIs' Categories

(a) Understand the distribution and relative importance of categories for each API in the dataset.

(b) Reveal similarities or differences between the categories of the two APIs, guiding strategic decisions and market positioning.

* Significance Testing for Error Rate(e.g., t-tests, Wilcoxon signed-rank tests):

(a)Identify if one API has significantly lower error rates.

(b)Choose the more reliable API with fewer operational issues.

* Significance Testing for Throughput (e.g., t-tests, Wilcoxon signed-rank tests):

(a) Ascertain if there are significant differences in throughput data between the two APIs

(b) Determine which API performs better in handling workload or processing capacity

* Significance Testing for Average Response Time (e.g., t-tests, Wilcoxon signed-rank tests):

(a)Assess if one API consistently responds faster.

(b)Select the API that provides better user experience and engagement.

Based on the results of the correlation test (which we haven't done yet due to lack of data), for the last three tests, we'll probably only select part of them do finish.