Title: A/B Test Analysis Results and Recommendations

Introduction:

In this report, I will present the results of an A/B test conducted on two groups of website users over a 13-day period. Group A, the Control group, consisted of 24,343 unique users, while Group B, the Treatment group, comprised 24,600 unique users who were exposed to a new feature on the website. The statistical calculations indicate that the performance of groups A and B is not equal, with a p-value of 0.001, leading to the rejection of the null hypothesis (H0: A-B=0). The analysis revealed an 18.02% improvement in the conversion rate and a 0.48% increase in average revenue per user for the Treatment group.

Recommendation:

Based on the data analysis, it is recommended to proceed with launching the experiment. The positive improvements observed in both the conversion rate and average revenue per user, despite the relatively small revenue increase, make the implementation and maintenance costs of the new feature worthwhile. However, I strongly advise conducting another test on a larger population over a longer time period of at least 6 weeks. This recommendation is supported by the following reasons:

1. Capture Potential Outcomes:
   During the analysis, it was observed that a significant portion of the converted users (27.17%) returned to the website after a few days (1 to 6 days) and made purchases. Moreover, these returning users accounted for 23.41% of the total revenue generated. By analyzing a longer time period, we can capture the potential conversions and purchase amounts from these returning users. Focusing solely on the initial 13-day data might lead to missed opportunities and an inaccurate assessment of the new feature's impact.
2. Skewed Data Distribution:
   The chart depicting the data distribution over time shows a right-skewed pattern. Based on the analysis, the forecasted conversion rate and revenue in one month would be close to zero if we extrapolate the current trends. This finding necessitates a prompt and detailed investigation, which can be achieved by running new analyses. The skewed data distribution highlights the need to assess the long-term effects of the new feature thoroughly.

Suggestions for Engineering and Marketing Teams:

- Investigate Design Differences: While iOS and other device users demonstrated greater conversion rate improvements, only Android users exhibited an increase in average spending. It is recommended to investigate the design differences between Android and other devices to optimize the user experience across all platforms. Understanding these disparities will allow for tailored improvements to enhance user engagement.

- Country-Specific Analysis: Despite having a higher number of users, the average spending in the USA, Brazil, France, Turkey, and Germany was slightly lower. Exploring customer preferences in these markets will help identify growth opportunities tailored to their specific needs. Analyzing customer behavior, preferences, and cultural factors in these countries can unlock valuable insights to optimize marketing strategies.

Conclusion:

In conclusion, the A/B test analysis demonstrated significant improvements in the conversion rate and average revenue per user for the Treatment group. The recommendation is to proceed with launching the experiment, considering the positive improvements observed and the relatively low cost of implementation and maintenance. However, to capture potential outcomes and assess the long-term impact, it is highly recommended to conduct another test on a larger population over a minimum of 6 weeks.

In light of these insights, I invite you to explore our interactive charts and dashboards, utilizing the filters and tools to gain deeper customer understanding. This data-driven approach will empower us to make informed decisions and drive positive change.

Thank you for your support. Let's embrace these opportunities to achieve sustainable growth.

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