A/B Test Report (GloBox)

Introduction

We conducted an A/B test on an e-commerce website to determine whether a change to the website's layout would result in an increase in revenue. We split the users into two groups: a control group, which saw the original website, and a treatment group, which saw the website with the new layout. We then compared the revenue generated by each group to see if the treatment group had a statistically significant increase in revenue compared to the control group.

Methodology

We obtained data from the e-commerce website on user ID, group (A or B), and total amount spent. We first checked for outliers in the data and then split the data into control and treatment groups. We then calculated several metrics, including conversion rate, average order value, and total revenue for both groups.

Next, we calculated the percent differences between the treatment and control groups for conversion rate and average order value. We also used a chi-squared test to determine if there was a statistically significant difference between the number of users who made a purchase in the treatment and control groups.

Results

The treatment group had a higher conversion rate (4.63%) than the control group (3.92%), resulting in a 0.71% increase in conversion rate. The treatment group also had a slightly higher average order value (1.63%) than the control group. The total revenue generated by the treatment group was $83,415, while the control group generated $82,146, resulting in a difference of $1,269.

The chi-squared test showed that there was a statistically significant difference in the number of users who made a purchase in the treatment and control groups (p-value < 0.05).

Conclusion

Based on our analysis, we found that the treatment group had a statistically significant increase in revenue compared to the control group. The increase in conversion rate and total revenue were relatively small, but still significant. We recommend that the e-commerce website adopt the new layout for all users.