

A/B Test For GoBlox

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In this analysis, we're delving into the impact of changes made to the GoBlox application through an A/B test, where users were split into two groups: Group A and Group B. It's important to note that the split was 50/50, a standard practice in A/B testing. While I won't delve into specific group sizes to keep it straightforward, the total population analyzed was 48,943 individuals.

To avoid confusion, let's refer to Group A as the Control group (the unchanged application) and Group B as the Test group (the one with modifications). This distinction will remain consistent throughout the discussion.

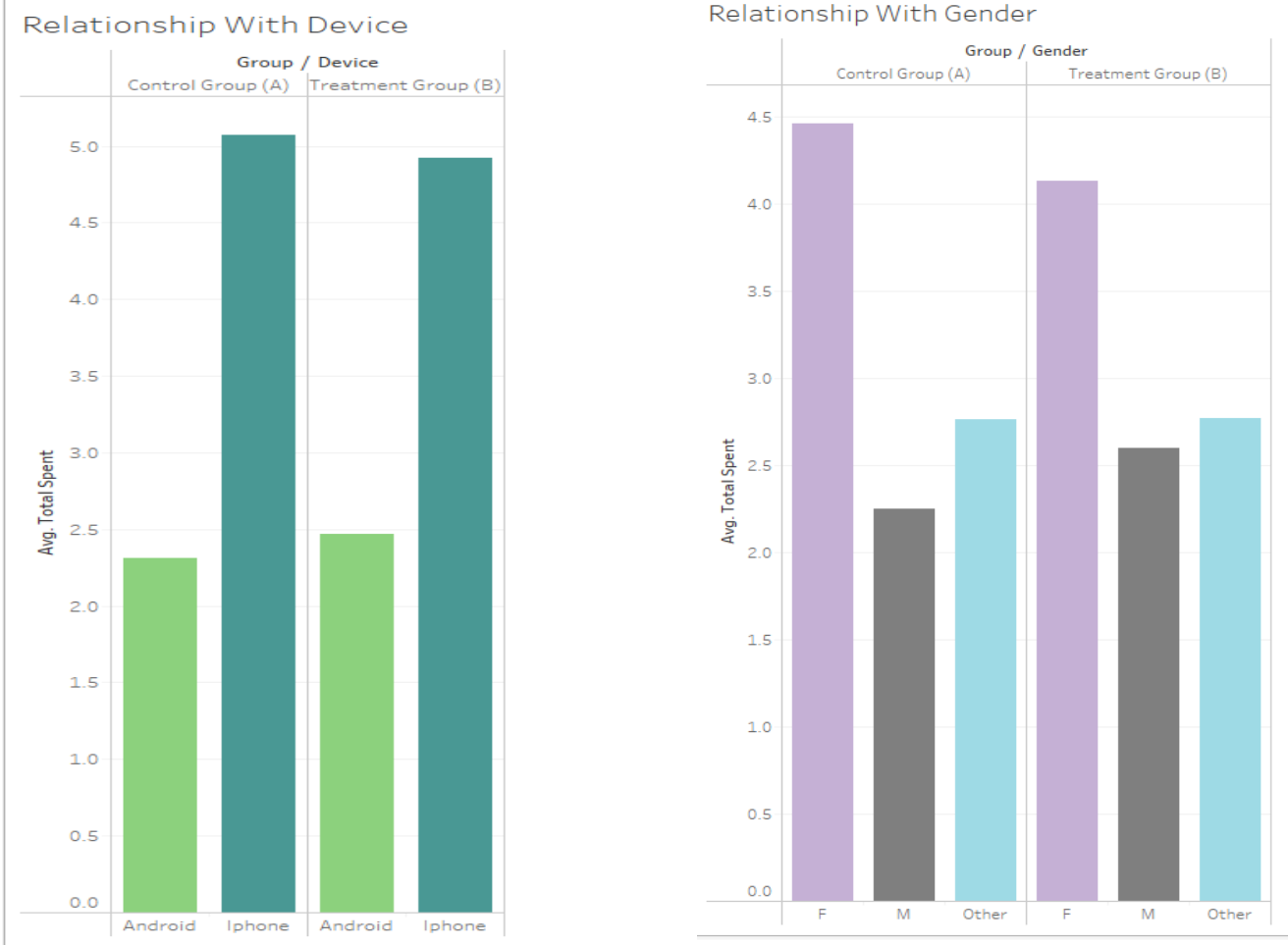
Now, let's talk about the conversion rates. In simple terms, this indicates the percentage of users who took a desired action, like making a purchase. The Control group had a conversion rate of 3.92%, meaning 3.92% of users converted, while the Test group had a slightly higher rate at 4.63%.

To figure out whether this difference is significant, we used some statistical tools. Think of it as a detective work where we try to determine if the changes are genuinely making a difference. The evidence we found suggests that the Test group's conversion rate is higher, but it's a subtle improvement.

AVG Spent		
Group	AVG Spent	Conversion Rate
Control Group (A)	3.375	0.039
Treatment Group (B)	3.391	0.046

I'd like to mention a couple of technical terms without getting too bogged down. The null hypothesis is like assuming there's no real change, and the alternative hypothesis is our suspicion that there is a meaningful difference. We found strong evidence against the idea that the changes are just random chance, supporting the notion that there might be a real impact, although not a huge one.

Digging a bit deeper, we looked at the spending habits of users on iPhones and Androids. Interestingly, iPhone users tended to spend more, both in the Control and Test groups. Similarly, across genders, females generally spent more than males and others. Notably, North America showed the highest concentration of app users.



Summing it up, visually presenting the data in Tableau reinforced our findings. While there's a slight uptick in conversion rates for the Test group, it's not substantial enough to confidently say, 'Yes, let's implement these changes.' It's more like a 'Maybe, let's explore further.'

In conclusion, the changes made to the application show promise, but they're not a game-changer. It might be worthwhile to explore other tweaks or conduct additional tests. If you have any questions or if there's a specific aspect you'd like more clarity on, feel free to reach out

- Code used for data cleaning

```
1 SELECT u.id AS id,
2       u.country,
3       u.gender,
4       g.device,
5       g.group,
6       CASE WHEN SUM(a.spent) > 0 THEN 'converted'
7            ELSE 'not converted'
8       END AS spent_status,
9       COALESCE(SUM(a.spent), 0) AS total_spent
10 FROM users AS u
11 JOIN groups AS g
12 ON u.id = g.uid
13 LEFT JOIN activity AS a
14 ON g.uid = a.uid
15 GROUP BY u.id, u.country, u.gender, g.device, g.group;
16
17
```

For further visual data and analysis, you can refer to my slide for better understanding.

LINKS

Spreadsheet:

https://docs.google.com/spreadsheets/d/1-kpwAXnm2eZLz7IYfgtdfa0qDonovg63pAsYJ_jfm5M/edit?usp=sharing

Tableau:

https://public.tableau.com/views/Project1_16886920589990/Dashboard1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link