

# TripleTen: Analytics Challenge



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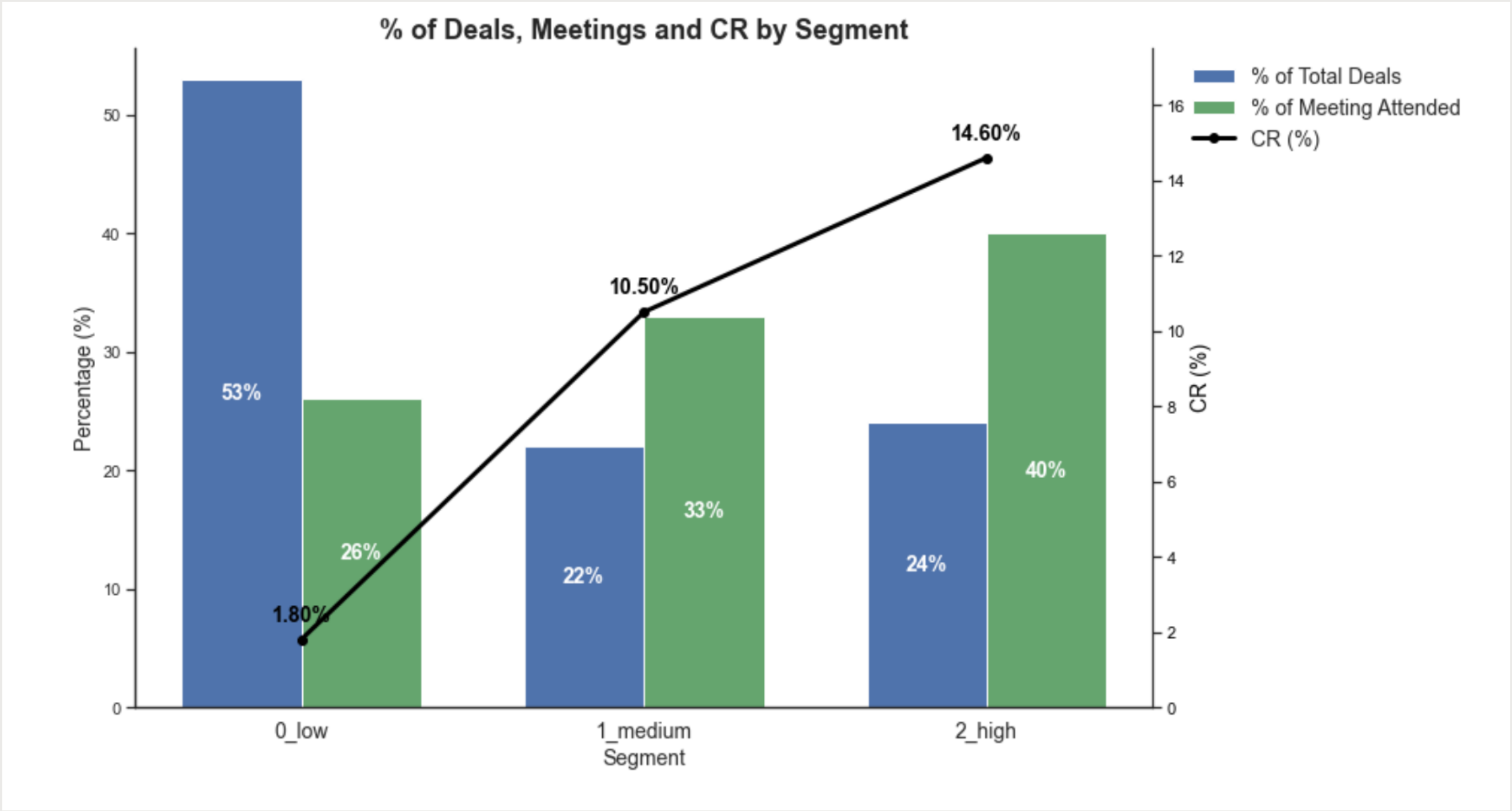
# Scoring Model Evaluation

- Short Task Description:** You need to evaluate a lead scoring model for TripleTen.
- The scoring system is based on a questionnaire, which appears early in the acquisition funnel and allows the team to segment the audience into categories.
- Each answer for each question has its own weight (can be negative) and after completion weights are summarized (linearly), and results in a score in range of [-4,4].
  - In the table you can find scoring results (points), and a respective share of CRM deals (a deal is created after the scoring is completed and a person books a call with a salesperson), attended meeting with salespeople (MA, you can assume it is proportional to sales department capacity = how many calls they can reasonably conduct within the period), payments and overall CR(deal-payment). E.g. a group of leads, who scored 1 point in the survey, represents 15% of all our deals in September 2024, attended 26% of all meetings in the same cohort, and resulted in 38% of all cohort purchases (all purchases made in any month resulted from deals created in September 2024)
  - Is the model “good enough” for its current application? Describe a criteria for the growth team to stop/continue using the model.
  - Provide a ranked list of 3-4 hypothesis for how the growth team can boost acquisition of prospective students by utilizing this model in other ways

Score	% of Total Deals	% of Total Meeting Attended	% of Total Payment	Segment	CR(Deal-Payment)
-4	1%	0%	0%	low	1.8%
-3	4%	0%	0%		
-2	19%	1%	1%		
-1	29%	25%	13%		
0	22%	33%	33%	medium	10.5%
1	15%	26%	38%	high	14.6%
2	8%	12%	13%		
3	1%	2%	2%		
4	0%	0%	0%		

# Scoring Model Evaluation

## Distribution Deals, Meetings & CR with Segment Breakdown



# Scoring Model Evaluation

## Overview & Interpretation

### Overview key model metrics from the table

1. Low segment (score  $\leq -1$ ): ~53% of deals but only 14% of payments  $\rightarrow$  very low conversion (1.8% CR).
2. Medium segment (score = 0): 22% of deals, 33% payments, CR = 10.5%  $\rightarrow$  better conversion.
3. High segment (score  $\geq 1$ ): 24% deals, 53% payments, CR = 14.6%  $\rightarrow$  best conversion.

### Interpretation

1. The model clearly segments leads by quality:
  - Low segment has very low conversion rate.
  - Medium segment is better.
  - High segment is significantly better than low and medium.
2. The sales efforts seem to be distributed (meetings %), but high segment has disproportionately more payments despite fewer deals.
3. The conversion rate (CR) difference is the main success indicator here.

# Scoring Model Evaluation

**Define a simple criterion for the growth team**

## **Criterion 1: Meeting Allocation Efficiency**


The model is good enough if the High + Medium segments have:

-  At least 70% of Total Meetings
-  At least 70% of Total Payments

### **Why it matters:**

**This ensures that the sales team spends most of their time on leads that actually generate revenue, making the sales process more efficient and reducing wasted effort on low-potential leads.**

### **Result:**


- 73% of Meetings
- 86% of Payments
-  Pass

# Scoring Model Evaluation

Define a simple criterion for the growth team

## Criterion 2: Conversion Rate Separation


The model is good enough if:

-  High segment conversion rate is at least 5× the Low segment
-  Medium segment conversion rate is between Low and High

**Why it matters:**

**This confirms the model meaningfully distinguishes between lead quality levels, so the scoring is predictive of actual buying behavior and can be trusted to guide sales prioritization.**

**Result:**

- Low CR = 1.8%
- Medium CR = 10.5%
- High CR = 14.6% (~8× Low)
-  Pass


**Conclusion:**


**The model meets both criteria and is good enough to continue using. It helps focus sales efforts and predicts lead quality well.**


# Scoring Model Evaluation

**Question 2: What are the top 3 ranked hypothesis for how the growth team can boost acquisition of prospective students by utilizing this model in other ways**

## **H1. Prioritize Sales Effort on High and Medium Segments to Maximize Conversion**

 **Why:** High and Medium segments represent 63% of meetings but 86% of payments (40% + 33%), showing they convert much better than Low. Focusing sales effort here makes the best use of limited sales capacity.

 **Hypothesis:** If sales efforts (calls/meetings) are reallocated to focus more on leads in the High and Medium segments, overall conversion and revenue will increase without needing more sales resources.


 **Action:** Use the scoring model to automatically prioritize scheduling calls for leads in the High and Medium segments earlier and more frequently, before Low segment leads. **Note:** Once this segmentation-based prioritization shows consistent results, consider refining further by using the exact lead score within each segment to prioritize the highest-scoring leads first, for even better efficiency.





# Scoring Model Evaluation

**Question 2: What are the top 3 ranked hypothesis for how the growth team can boost acquisition of prospective students by utilizing this model in other ways**

## **H2. Design Tailored Messaging or Nurturing for Low Segment Leads to Increase Their Quality**

 **Why:** Low segment leads represent 53% of deals but only 14% of payments and have a very low conversion rate (1.8%).

 **Hypothesis:** If low-scoring leads receive targeted nurturing or educational content that helps qualify them better or encourages behaviors closer to Medium/High segments, their conversion rate will improve..


 **Action:** Create automated email campaigns or pre-sales content specifically tailored for low segment leads to engage and nurture them before they are passed to sales.


# Scoring Model Evaluation

**Question 2: What are the top 3 ranked hypothesis for how the growth team can boost acquisition of prospective students by utilizing this model in other ways**

## **H3. Create Separate Sales Tracks or Offers Based on Segment**

 **Why:** The conversion rate difference between segments is large (Low = 1.8%, Medium = 10.5%, High = 14.6%).

 **Hypothesis:** If sales and marketing messaging, offers, or pricing are customized by segment (e.g., higher-touch sales for High, self-service or trial offers for Low), overall funnel efficiency and conversion will improve..

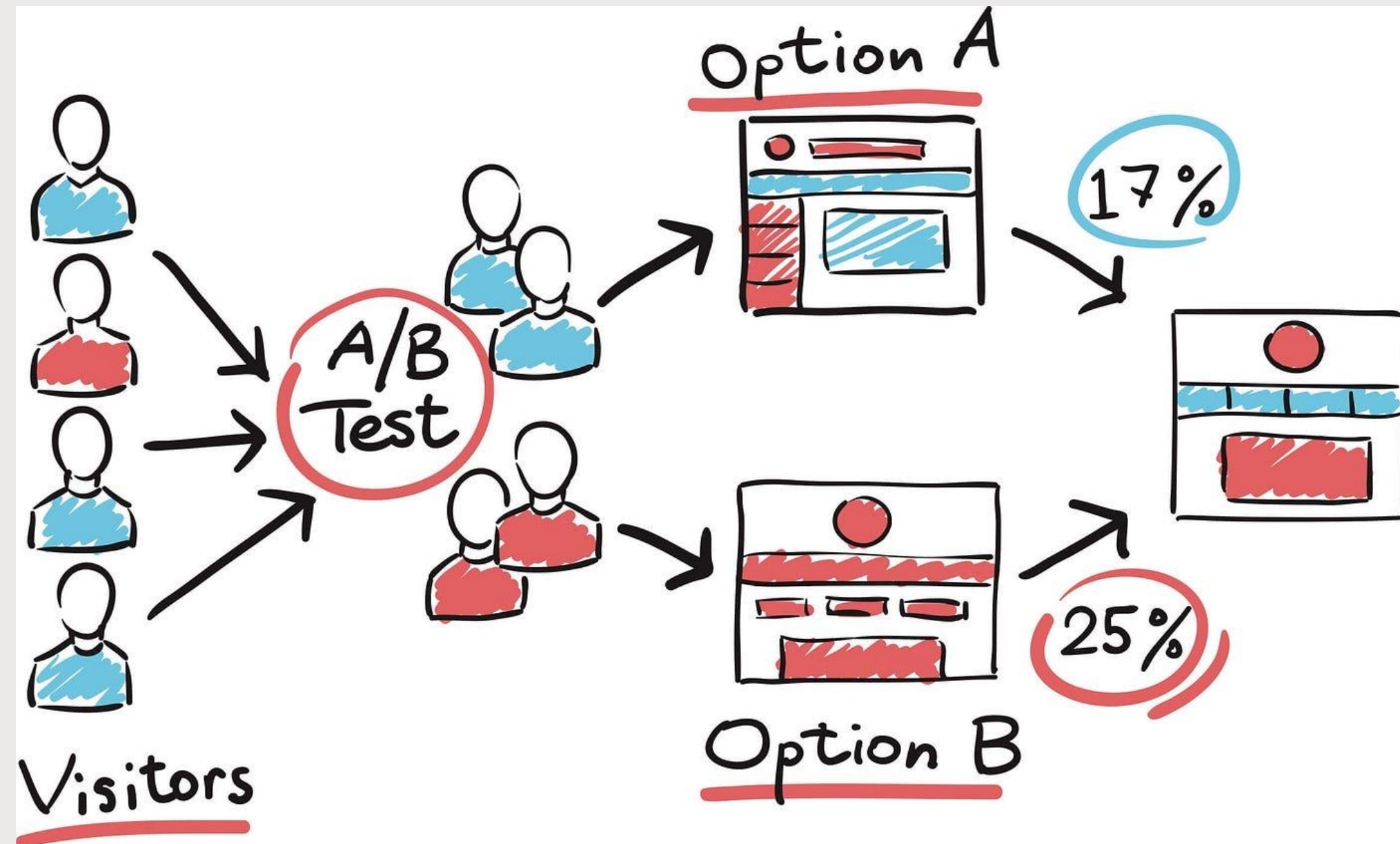
 **Action:** Experiment with segment-specific sales scripts, offers, or funnel flows to better match lead readiness and willingness to buy.

# A/B test Evaluation

**Short Task Description:** Imagine that, together with the growth and marketing departments, you conducted an experiment with an expectation of revenue increase.

- Variant A: Payment screen without any promotional offers
- Variant B: Payment screen with the promotional offer "You might also like these"

Task is evaluate the results of the A/B test, formulate a conclusion, and provide recommendations for the growth department.



# A/B test Evaluation

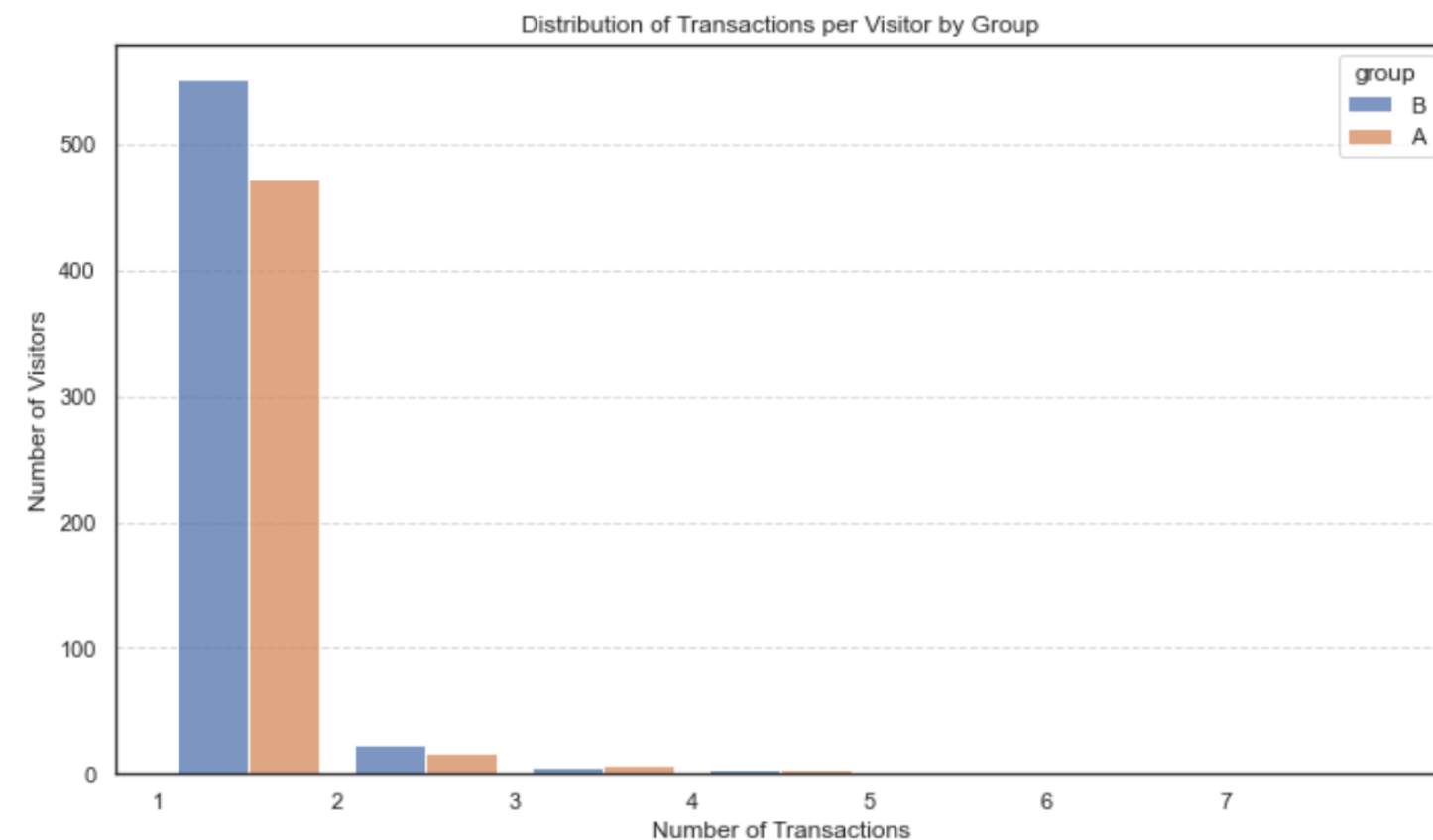
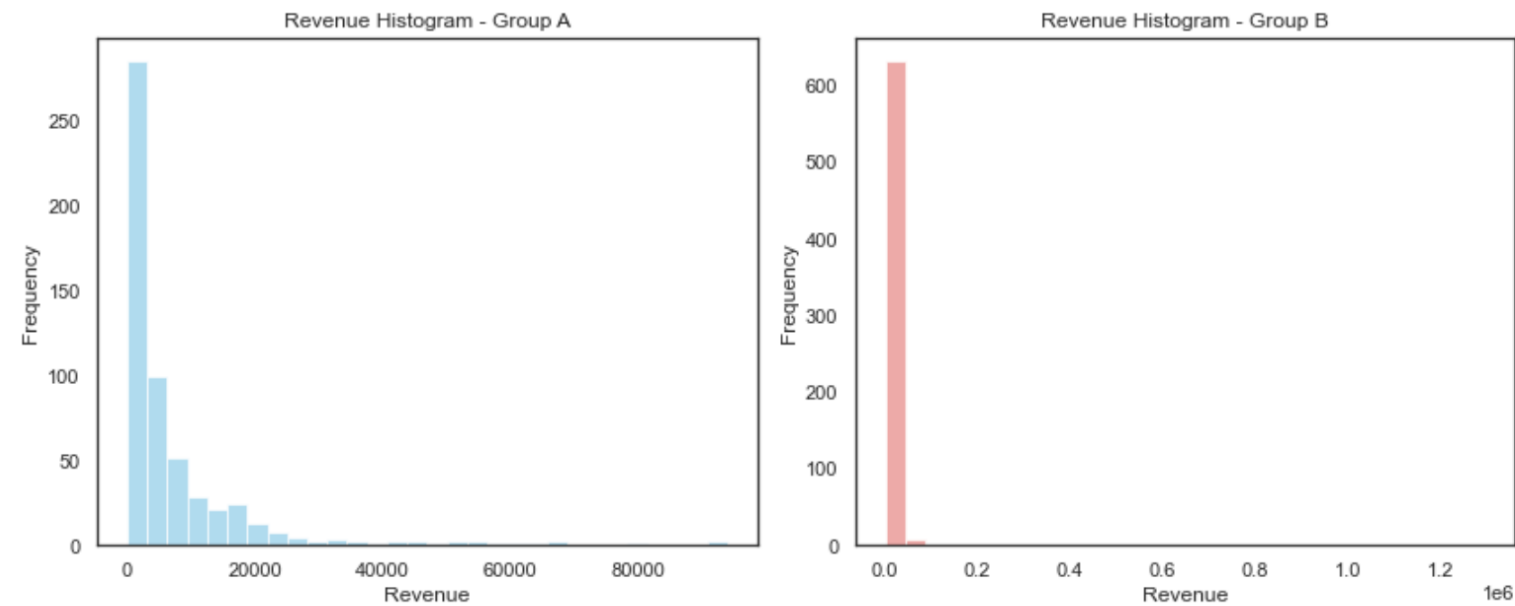
## Exploratory Data Analysis

### Found 2 issues:

- Intersection in groups
- Outliers

### Fixed as:

- Removed users which are in both groups
- Calculated 95 & 99 percentiles, chosen 99 to filter outliers



# A/B test Evaluation

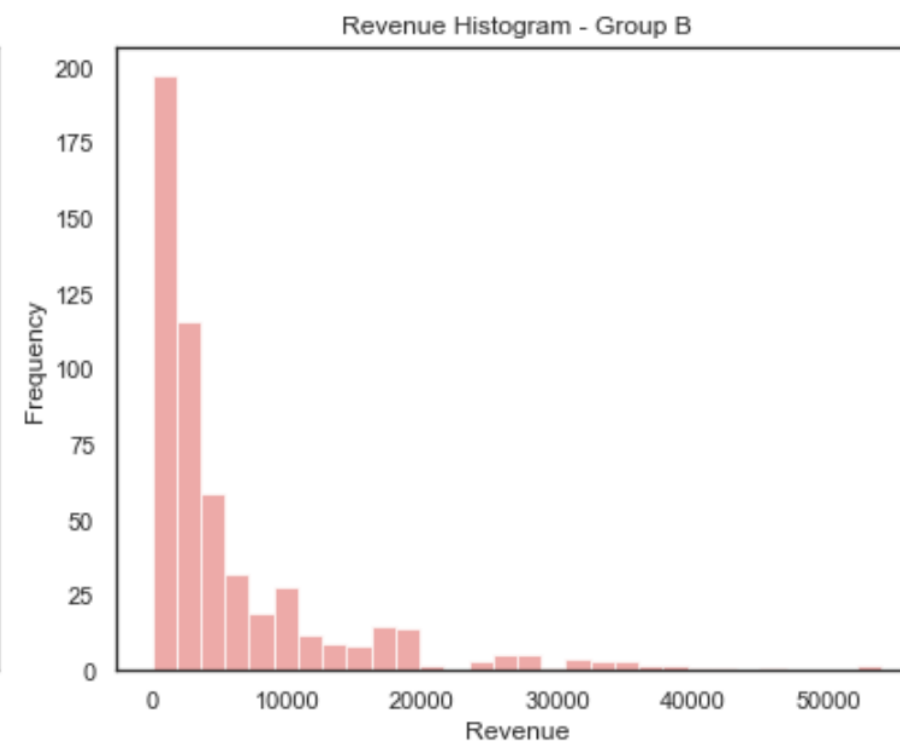
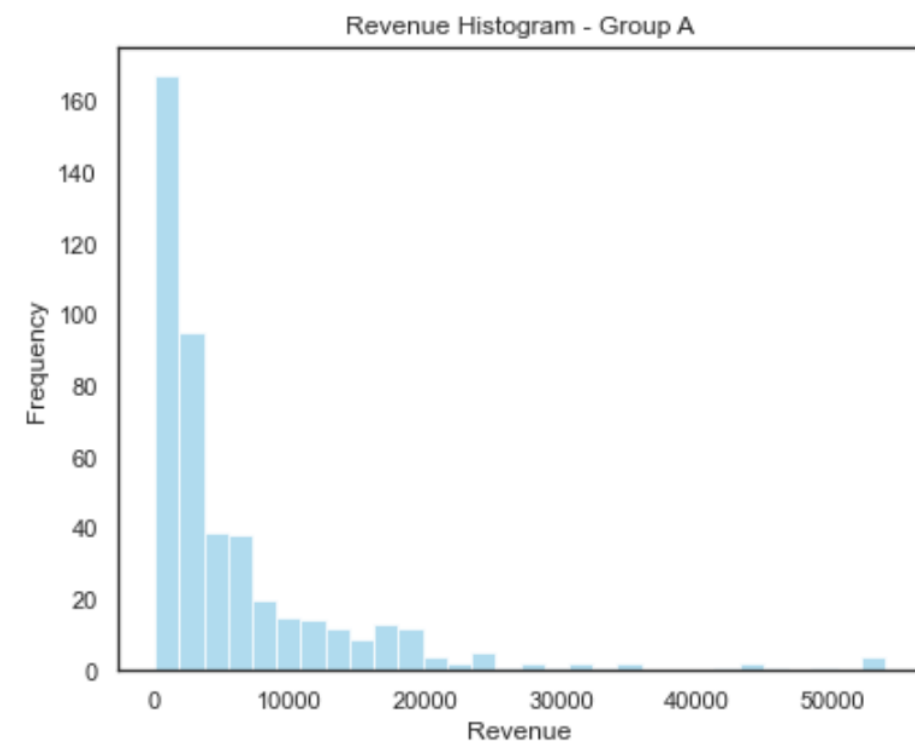
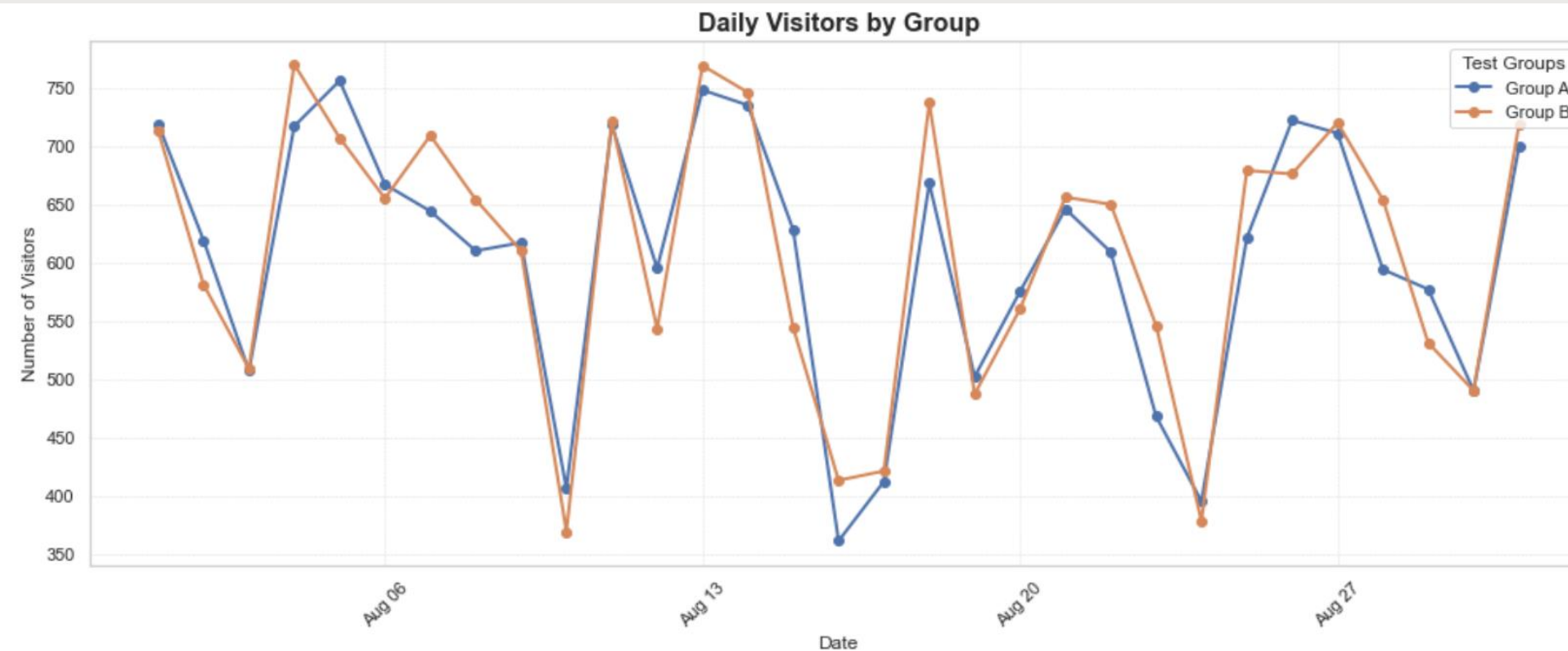
## Exploratory Data Analysis

### Found 2 issues:

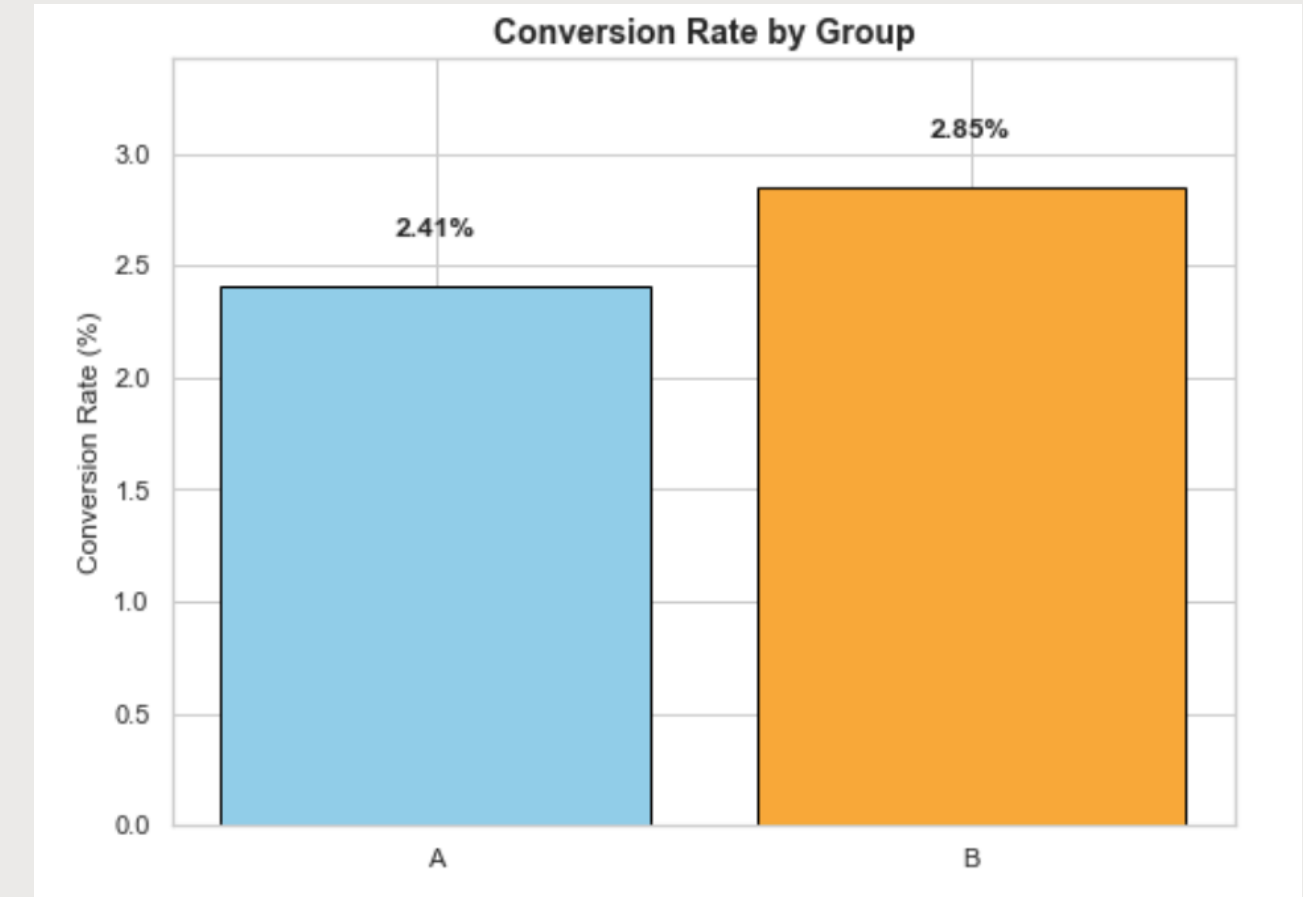
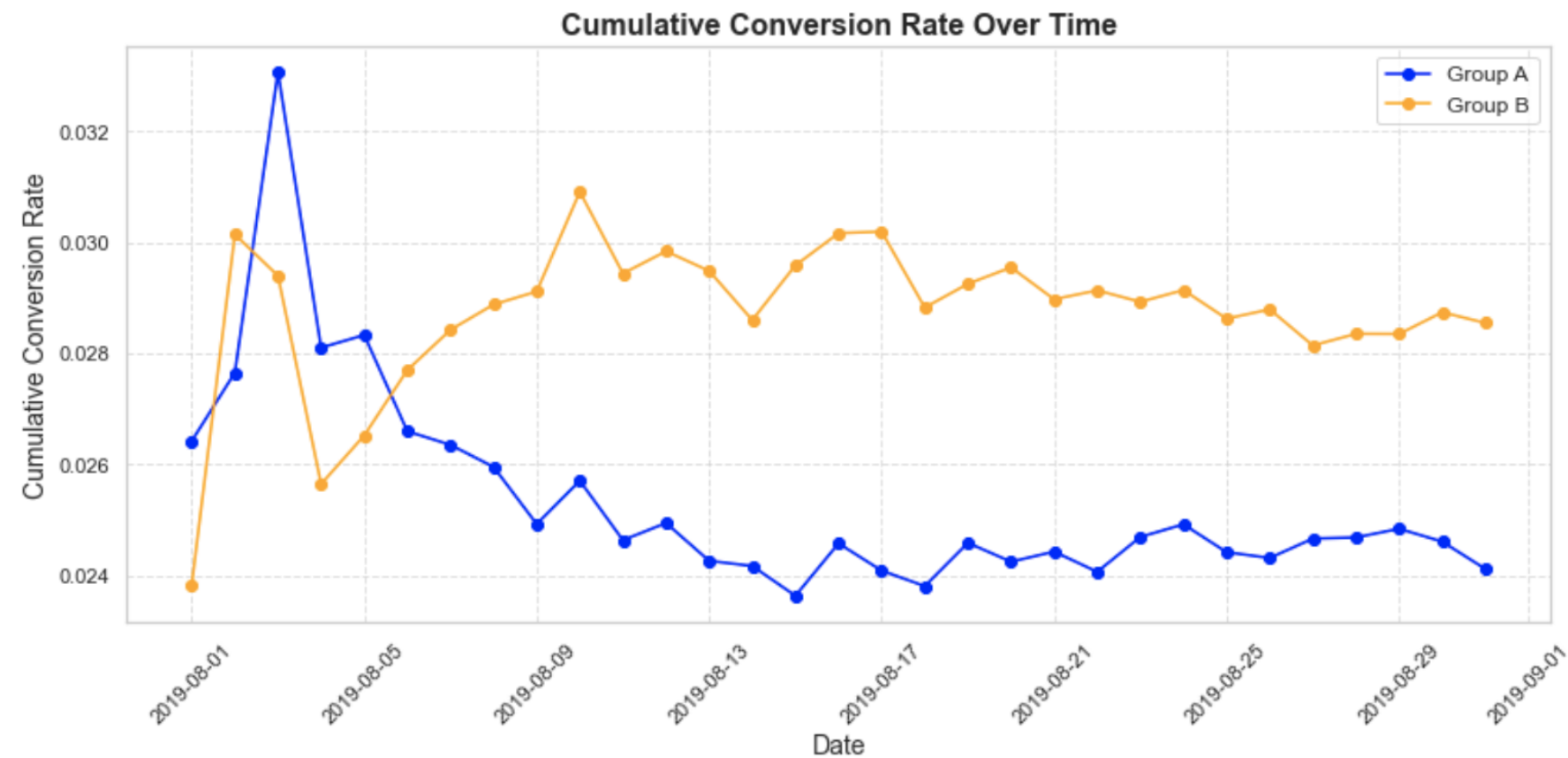
- Intersection in groups
- Outliers

### Fixed as:

- Removed users which are in both groups
- Calculated 95 & 99 percentiles, chosen 99 to filter outliers



# A/B test Evaluation



## Conversion Rate

- Conversion rate A: 2.412%
- Conversion rate B: 2.855%

## Conclusion:

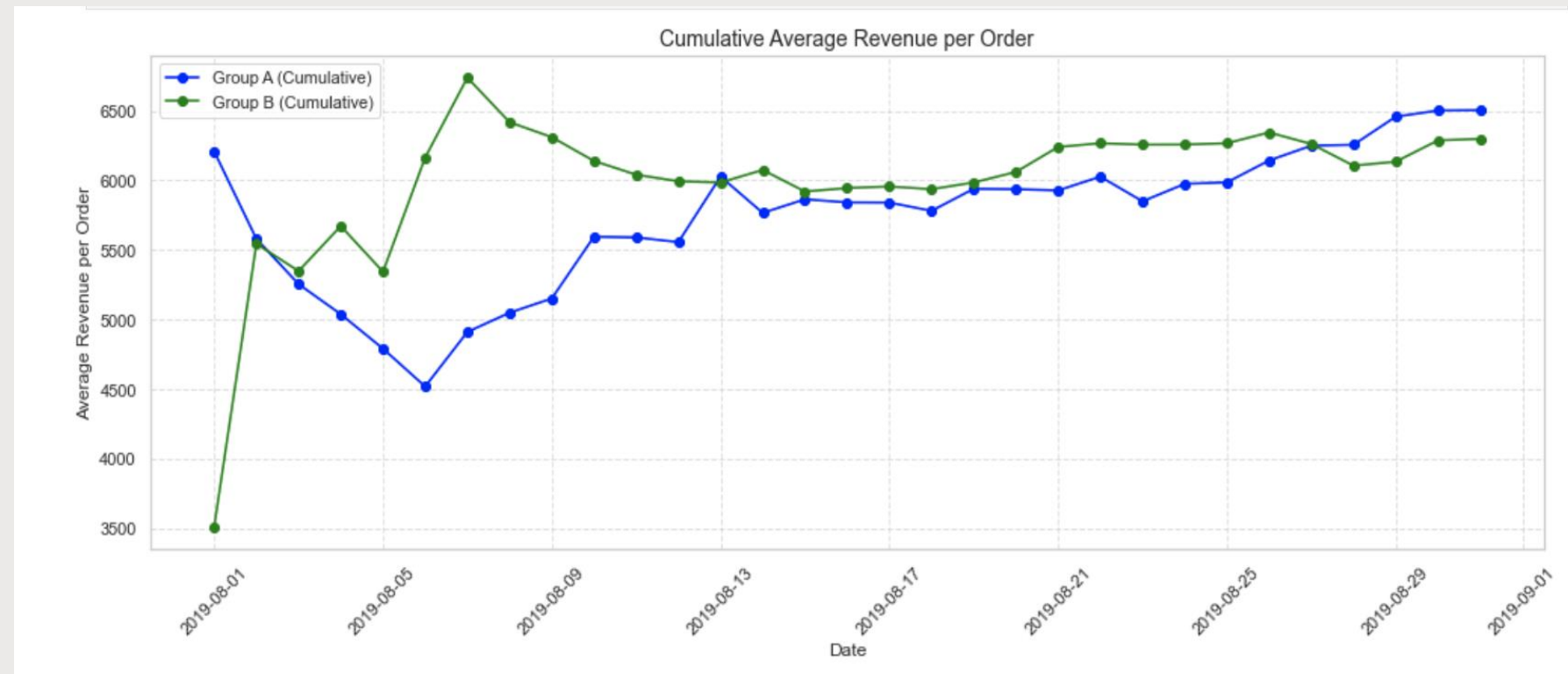
The null hypothesis (no difference in conversion rates) is rejected.

There is a significant difference in conversion rates between the control and test groups.

Variant B performs significantly better.



# A/B test Evaluation



## Average Revenue per Order

- Average Order Value (AOV) for Group A: 6504.55
- Average Order Value (AOV) for Group B: 6298.83

## Conclusion:

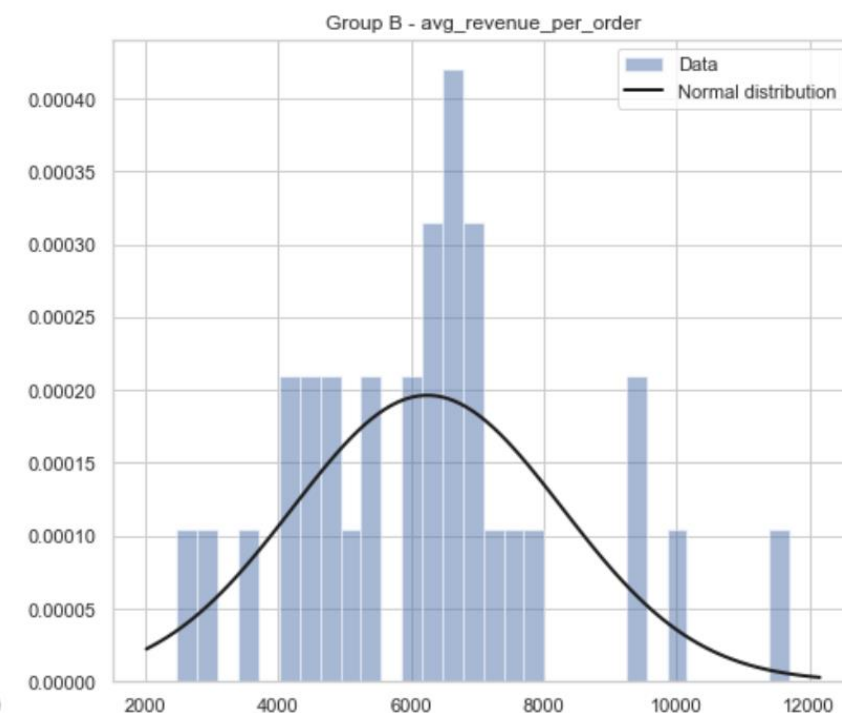
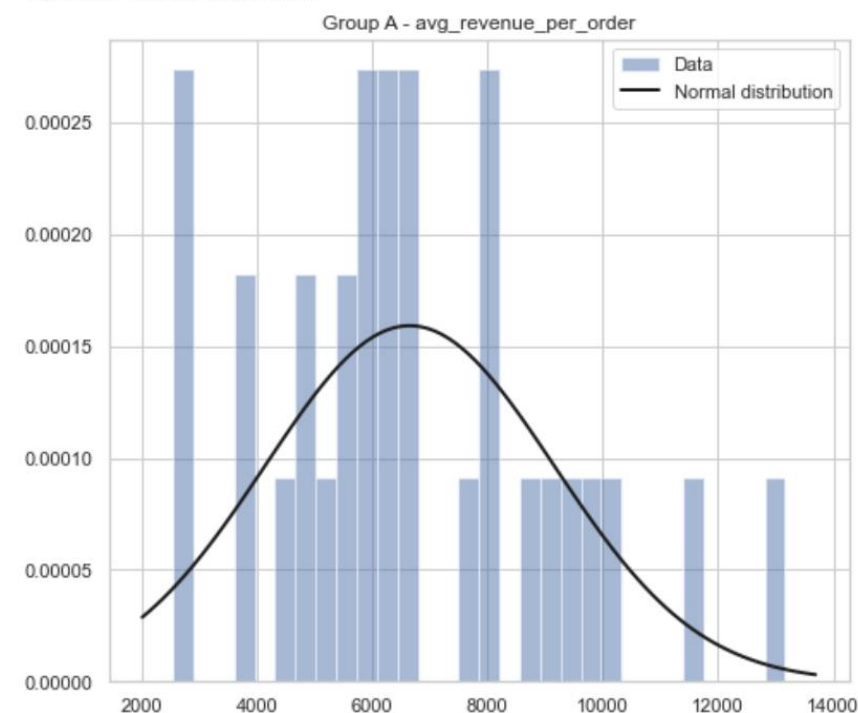
T-test statistic: 0.691

P-value: 0.4923

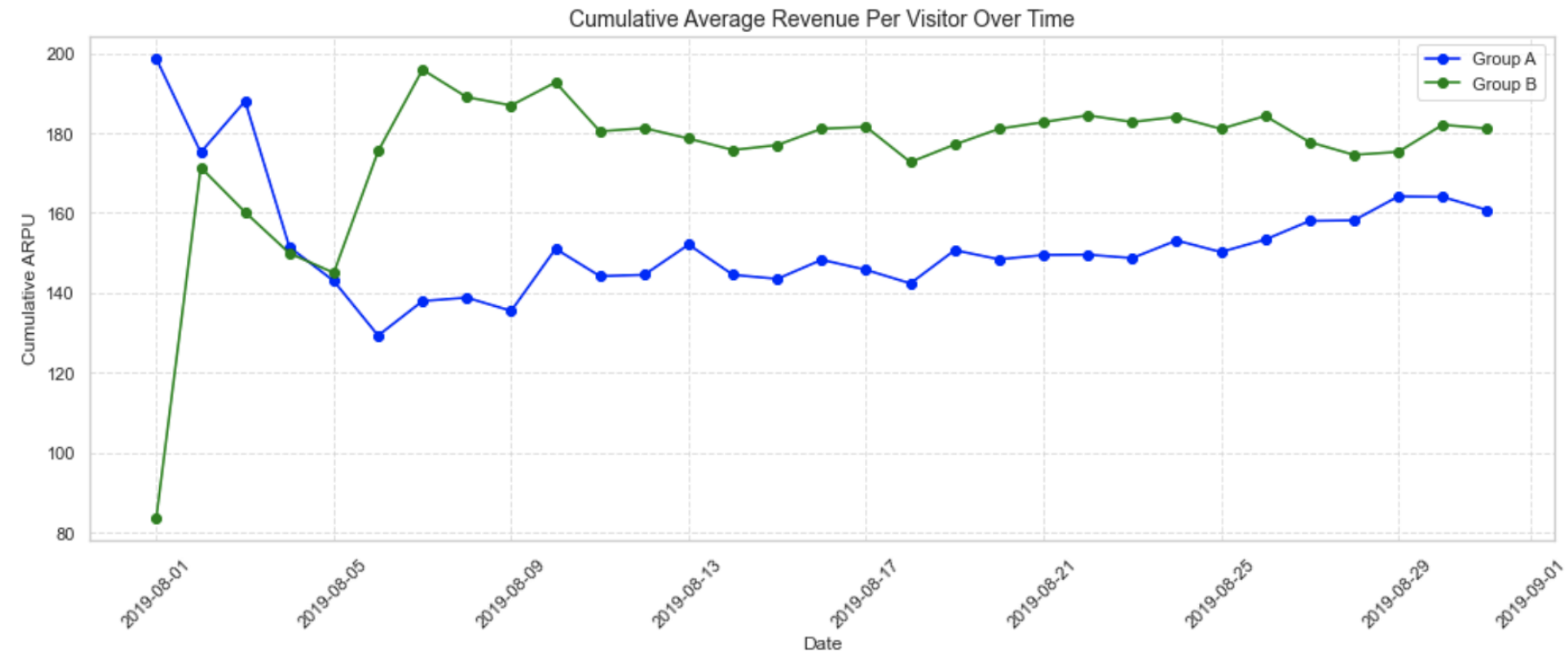
No statistically significant difference between groups (fail to reject H0)

Group A:  
Normal distribution.

Group B:  
Normal distribution.



# A/B test Evaluation



## ARPU

- ARPU for Group A: 160.74
- ARPU for Group B: 181.15

## Conclusion:

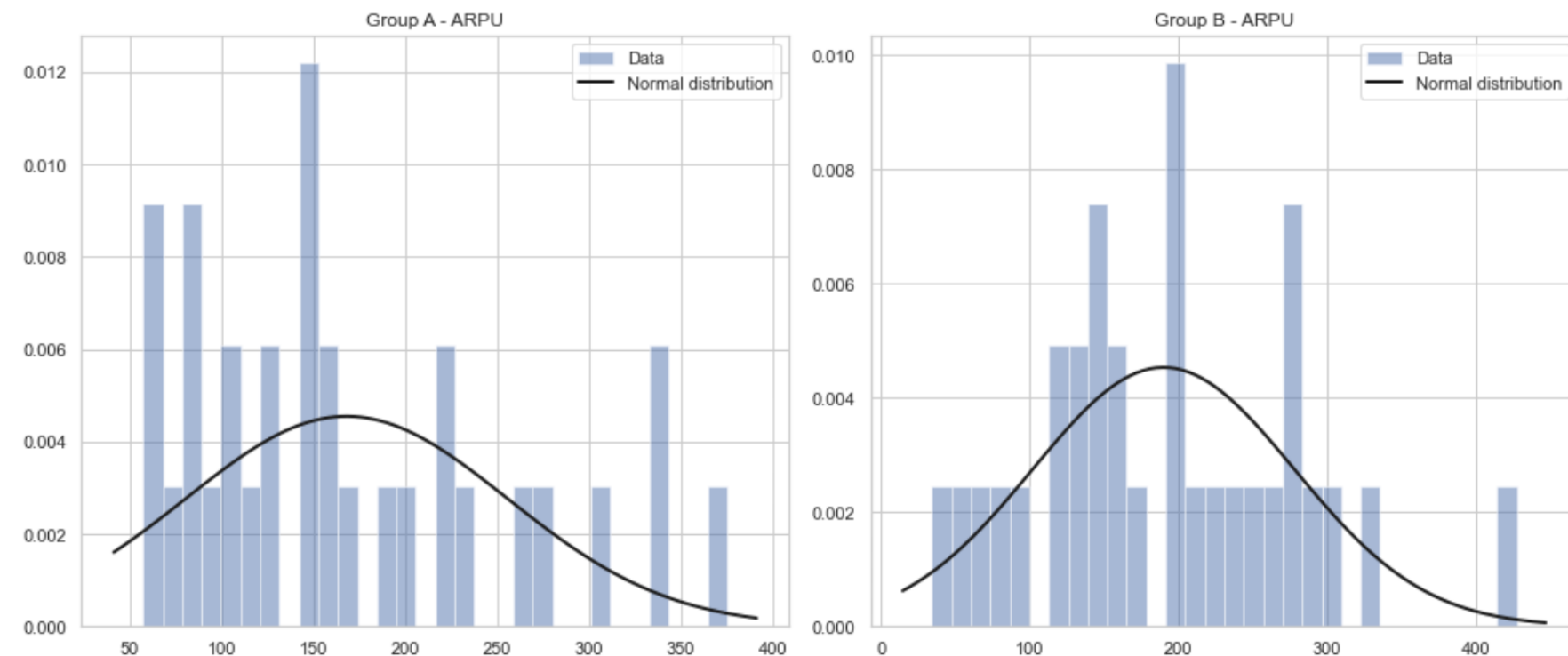
Mann-Whitney U statistic: 404.000

P-value: 0.2846

No statistically significant difference between groups (fail to reject H0)

Group A:  
Not a normal distribution.

Group B:  
Normal distribution.











# A/B test Evaluation

## Conclusion

- Variant B demonstrates a statistically significant improvement in conversion rate over Variant A.
- Although AOV is slightly lower in Variant B, the difference is not statistically significant.
- ARPU is higher in Variant B, indicating that the increase in conversions may be driving more total revenue per user, even though the difference is not statistically significant.
- Overall, Variant B improves user acquisition efficiency without sacrificing revenue quality.

## Recommendations for Growth Team

-  Monitor AOV and ARPU post-rollout, especially since Variant B users place more orders but spend slightly less per order — focus on net revenue impact.
-  Adopt Variant B as the new default, given its proven impact on conversion rate and the trend toward higher ARPU.
-  Explore strategies to lift AOV in Variant B, such as:
  - Intelligent product bundling
  - Targeted promotions
  - Personalized upselling techniques
-  Consider running a follow-up experiment focused specifically on ARPU optimization — since Variant B shows potential, additional iterations may solidify revenue gains.
-  Communicate the success of Variant B to product and marketing stakeholders as a validated growth lever.
-  Take a close look at found error and investigate the root reasons



This is just the beginning  
Let's discuss the next steps.

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