A/B Test Report

# 1. Introduction

The goal of this A/B test was to evaluate whether introducing a new feature on the website (Treatment group) leads to a statistically significant improvement in user conversions compared to the existing version (Control group).

# 2. Methodology

- Test Design:  
 Users were randomly assigned into two groups of equal size:  
 \* Control (A): Current website version  
 \* Treatment (B): New feature enabled  
  
- Duration: 14 days  
- Sample Size: 5,000 users per group (10,000 total)  
- Key Metric: Conversion Rate (conversions ÷ total users)  
  
- Hypotheses:  
 \* Null (H₀): Conversion rates are equal between Control and Treatment (pA = pB)  
 \* Alternative (H₁): Conversion rates differ between Control and Treatment (pA ≠ pB)  
  
- Statistical Test: Two-proportion Z-test with α = 0.05  
- Additional Metrics: Average Clicks per User, Average Page Views per User

# 3. Key Findings

**- Conversion Rates:**  
 \* Control (A): 0.0958  
 \* Treatment (B): 0.1180  
  
- **Observed Lift:**  
 \* Absolute Difference: 0.022  
 \* Relative Lift: 23.17%

**- Statistical Test Results:**  
 \* Z-statistic: 3.5924  
 \* P-value: 0.00033  
 \* 95% Confidence Interval for Difference: [0.0101,0.0343]  
  
**- Decision:**  
 Since p < 0.05 and the confidence interval does not include zero, we reject the null hypothesis.

# 4. Interpretation

The treatment group achieved a statistically significant improvement in conversion rate compared to the control group. The observed lift of approximately +1.5 percentage points (~+15% relative) suggests the new feature had a positive and meaningful impact.

# 5. Recommendations

1. Roll Out the Feature Broadly  
 Deploy the new feature to all users, as it improves conversions significantly.  
  
2. Monitor Long-Term Performance  
 Track conversion trends after rollout to ensure the observed uplift persists over time.  
  
3. Iterate for Further Optimization  
 Conduct additional A/B tests with variations of the feature to identify potential improvements.

# 6. Conclusion

The A/B test provides strong statistical evidence that the new feature increases user conversions. Given both statistical and practical significance, the feature should be rolled out site-wide.