

Method: Comprehensive A/B Test Validation (SRM, CBV, Temporal Stability, and Multiple Testing Correction)

Status: PASSED

Observation: The experiment has successfully passed all four validation stages.

1. Sample Ratio Mismatch (SRM): Confirmed perfect traffic allocation with exactly 6,000 sessions per variant ($p\text{-value} = 1.000$).
2. Covariate Balance Verification (CBV): No significant bias was found in device type ($p=0.324$) or browser distribution ($p=0.465$), ensuring a fair comparison between groups.
3. Temporal Stability Test: Daily traffic ratios remained consistent at approximately 33.3% for each variant throughout the 14-day duration, with no time-based anomalies detected.
4. Multiple Testing Correction: After applying the Benjamini-Hochberg procedure to 10 metric-variant combinations, the results for Variant B (Revenue and Average Product Price) remained statistically significant. This confirms that the observed improvements are robust and the risk of False Positives (Type I Error) has been effectively controlled.