

Criteo AXSI Portfolio Project: Business Insights

1. Overview

This dashboard simulates a Criteo-style upper-funnel campaign analysis using synthetic data. It showcases how user exposure, engagement, and conversion can be measured to guide marketing and product decisions. The ETL pipeline and dashboard architecture were built with Python and Streamlit, designed for real-time filtering and visual analysis.

2. Key Metrics Performance

The dashboard tracks three key performance indicators (KPIs): Click-Through Rate (CTR), Average Dwell Time, and Conversion Rate. These KPIs give a high-level indication of how users are interacting with marketing materials and whether those interactions lead to meaningful actions (conversions).

3. Exposure vs. Conversion

Users exposed to ads more frequently tended to convert at a slightly higher rate, with a clear uptick in conversion for users with 6–20 exposures. This suggests that repeated upper-funnel touchpoints may be effective in priming users for conversion, but diminishing returns may occur beyond that range.

4. Engagement vs. Conversion

While we attempted to analyze the relationship between engagement and conversion behavior, the synthetic data does not exhibit a strong correlation. In practice, we would expect higher engagement to correlate with conversion uplift. The limitation here lies in the randomness of our simulation. To address this in a production setting, we would:

- Introduce causal dependencies in the simulation (e.g., high dwell time increases conversion probability),
- Use weighted probabilities for click/conversion outcomes,
- Run actual A/B tests to observe behavior-based uplift.

5. Recommendations

This prototype provides a scalable way to monitor and validate upper-funnel campaign performance. With richer behavioral data and client-specific metrics, this approach can evolve into a full-fledged reporting solution across regions, device types, and audience segments.