

Executive Insight Report

Generated: December 03, 2025

Executive Summary

- ## KPI Summary
- - **total_volume**: 237609
- - **total_value**: {'user_id': 11038013665, 'app_code': 59188395, 'is_4g': 85851, 'is_click': 10862}

Key Findings

- ## Performance Analysis
- ### Summary Statistics:
 - - **user_id**: Mean=46454.52682768751, Median=46597.0, Std=26802.726666116265
 - - **app_code**: Mean=249.09997096069594, Median=213.0, Std=135.21360889979172
 - - **is_4g**: Mean=0.3613120715124427, Median=0.0, Std=0.48038175412328926
 - - **is_click**: Mean=0.04571375663379754, Median=0.0, Std=0.2088640531175953
- ### Outliers Detected:
 - - **app_code**: 0 outliers detected

Recommendations

- ## Recommendations
- 1. **Data Quality**: Ensure all missing values are addressed before further analysis
- 2. **Outlier Management**: Investigate and handle detected outliers appropriately
- 3. **Performance Optimization**: Focus on top-performing segments
- 4. **Monitoring**: Implement continuous monitoring of key metrics
- 5. **Documentation**: Maintain detailed records of all changes and decisions

Data Quality Report

- Data shape: { 'main': { 'before': { 'shape': (237609, 7), 'missing_values': 0, 'duplicates': 0, 'dtypes': { 'impression_id': dtype('O'), 'impression_time': dtype('O'), 'user_id': dtype('int64'), 'app_code': dtype('int64'), 'os_version': dtype('O'), 'is_4G': dtype('int64'), 'is_click': dtype('int64') }, 'numeric_columns': ['user_id', 'app_code', 'is_4G', 'is_click'], 'categorical_columns': ['impression_id', 'impression_time', 'os_version'], 'memory_usage_mb': 59.08315658569336}, 'after': { 'shape': (237609, 7), 'missing_values': 0, 'duplicates': 0, 'dtypes': { 'impression_id': dtype('O'), 'impression_time': dtype('O'), 'user_id': dtype('int64'), 'app_code': dtype('int64'), 'os_version': dtype('O'), 'is_4g': dtype('int64'), 'is_click': dtype('int64') }, 'numeric_columns': ['user_id', 'app_code', 'is_4g', 'is_click'], 'categorical_columns': ['impression_id', 'impression_time', 'os_version'], 'memory_usage_mb': 59.08315658569336}, 'missing_patterns': {} }, 'items': { 'before': { 'shape': (132761, 6), 'missing_values': 0, 'duplicates': 0, 'dtypes': { 'item_id': dtype('int64'), 'item_price': dtype('int64'), 'category_1': dtype('int64'), 'category_2': dtype('int64'), 'category_3': dtype('int64'), 'product_type': dtype('int64') }, 'numeric_columns': ['item_id', 'item_price', 'category_1', 'category_2', 'category_3', 'product_type'], 'categorical_columns': [], 'memory_usage_mb': 6.077442169189453}, 'after': { 'shape': (132761, 6), 'missing_values': 0, 'duplicates': 0, 'dtypes': { 'item_id': dtype('int64'), 'item_price': dtype('int64'), 'category_1': dtype('int64'), 'category_2': dtype('int64'), 'category_3': dtype('int64'), 'product_type': dtype('int64') }, 'numeric_columns': ['item_id', 'item_price', 'category_1', 'category_2', 'category_3', 'product_type'], 'categorical_columns': [], 'memory_usage_mb': 6.077442169189453}, 'missing_patterns': {} } }
- All data processed and validated

Key Metrics

Metric	Value
total_volume	237,609.00
total_value	user_id: 11038013665, app_code: 59188395, is_4g: 85851

Top KPIs

