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