

E-Commerce Customer Churn Analysis & Retention Strategy

Data-driven insights to improve customer retention and revenue stability – executive summary for leadership and growth teams.

SECTOR: E-COMMERCE ANALYTICS

THEME: DARK, PREMIUM

Project Team



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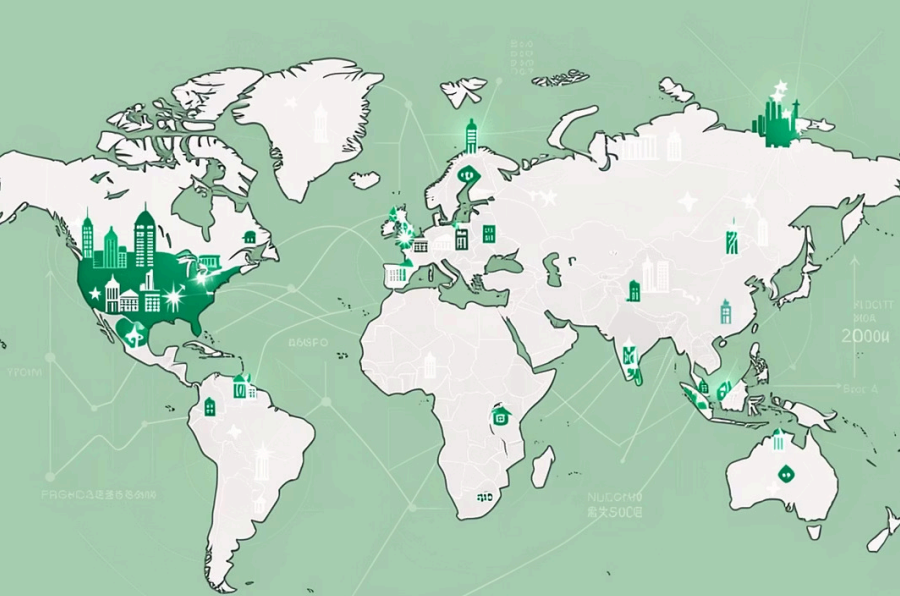


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Business Context & Strategic Problem



Context

Customer retention is critical for revenue stability, long-term growth and CLV.

Decision Makers

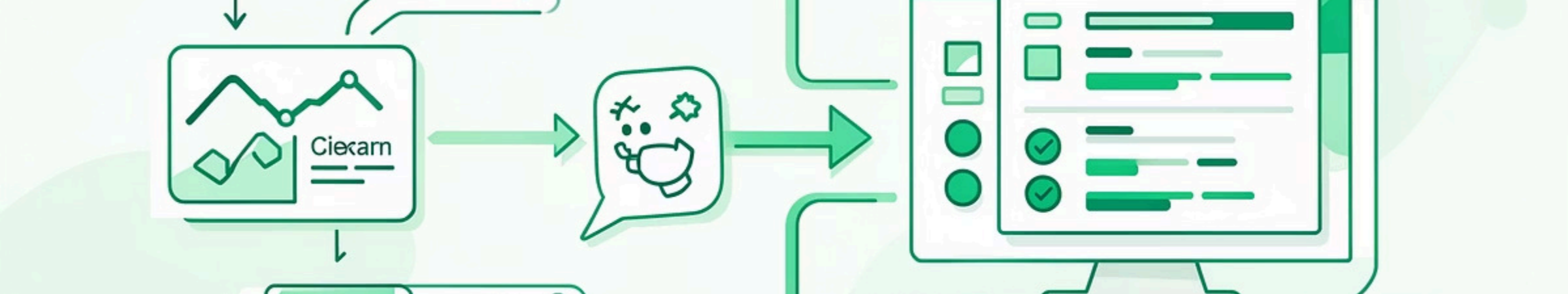
Business leadership, growth teams and retention managers.

Problem

Lack of visibility into churn patterns by country and city limits targeted retention.

Objective

Use analytics to identify churn drivers, high-risk segments and actionable retention opportunities.



Data Pipeline & Preparation

Source & Scope

Customer behaviour dataset – initial 50,000 rows, final sample 10,000 rows. Countries: USA, UK, Canada, Australia, Germany, France, India, Japan.

Cleaning

Removed age outliers (e.g., 150), handled missing values (median/mean/mode/logical), fixed negative purchases, flagged missing social engagement.

Features

Key variables: Country, Churn Status, Total Purchases, Avg Order Value, Session Duration, Cart Abandonment Rate, Social Engagement Score.

Flow

Raw Data → Cleaning → Feature Engineering → Analysis → Dashboard

Business KPI Framework



Total Customers

9,999



Total Orders

130,279



Total Sales

\$14.4M



Avg Order Value

\$123.77



Cart Abandonment

57.09%



Churn Rate

28.70%

These KPIs measure performance, engagement health and retention risk – dashboard ready for executive monitoring.

Key Business Insights (EDA)

Insight 1

Churn rate 28.7% – nearly 3 in 10 customers disengage.

Insight 2

Cart abandonment 57% – significant checkout friction.

Insight 3

USA leads in total purchases and revenue contribution.

Insight 4

Higher engagement correlates with substantially lower churn.

Insight 5

Session duration, purchase frequency and engagement strongly predict retention.

Insight 6

Social engagement and interaction improve retention significantly.

Root Cause Analysis of Customer Churn



Churned customers display declining engagement leading up to exit.

Primary Predictors

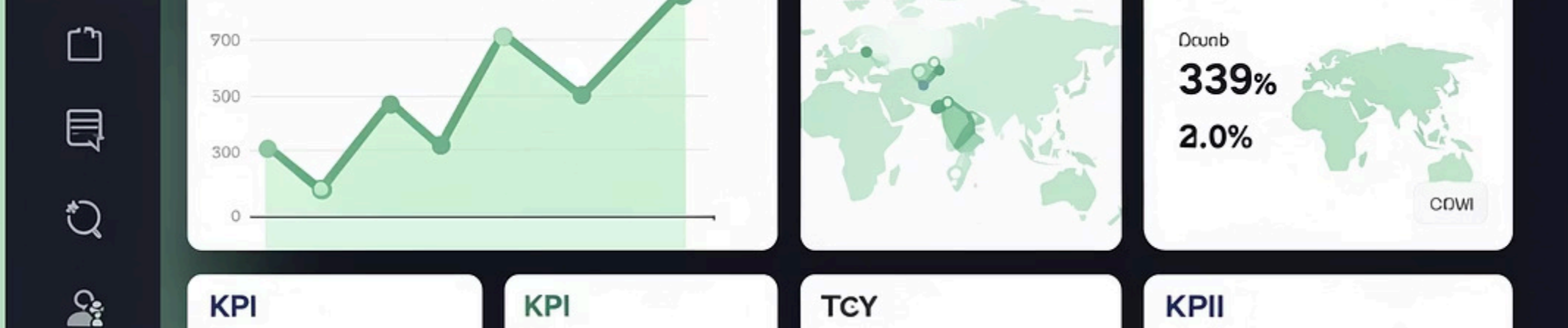
Session duration, cart abandonment and purchase frequency.

Behavioural Pattern

Engagement decline precedes churn – opportunity for early intervention.

Strategic Takeaway

Improve engagement and checkout experience to reduce churn.



Interactive Dashboard Overview

- **Executive View**

Total revenue, churn overview, country performance and KPIs.

- **Operational View**

Behaviour segmentation, country churn analysis and engagement metrics.

- **Interactive Filters**

Country, Gender, Churn status for targeted analysis.

Designed for rapid executive decisions and operational drill-downs.

Strategic Recommendations

1

Targeted Retention Campaigns

Focus on high-churn geographies with tailored offers and outreach.

2

Checkout Optimisation

Reduce friction to lower cart abandonment and complete more purchases.

3

Personalised Engagement

Use behavioural triggers and personalised marketing to boost interaction.

4

Loyalty & Rewards

Introduce programs to increase repeat purchases and lifetime value.

5

Continuous Monitoring

Track churn KPIs for proactive, measurable intervention.

Next Steps & Call to Action

1. Pilot Interventions

Run targeted campaigns in top high-churn markets.

2. Optimise Checkout

AB test UX changes to reduce abandonment.

3. Deploy Personalisation

Activate behavioural triggers and engagement flows.

4. Monitor & Iterate

Track KPIs and scale what reduces churn.

- ❑ Recommendation: Begin pilot within 30 days and report weekly to leadership.

