Cart Abandonment: Key Drivers and Actionable Insights

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Agenda

Business Problem

What's the Problem?

- Items added, no order
- Missed expected orders
- Incomplete digital journeys

Why Matters?

- Lost revenue
- Poor forecasting
- Delivery disruption
- Low digital engagement

What This Means?

- Unstable order cycles
- Operational inefficiency
- Lower platform adoption
- Higher customer friction
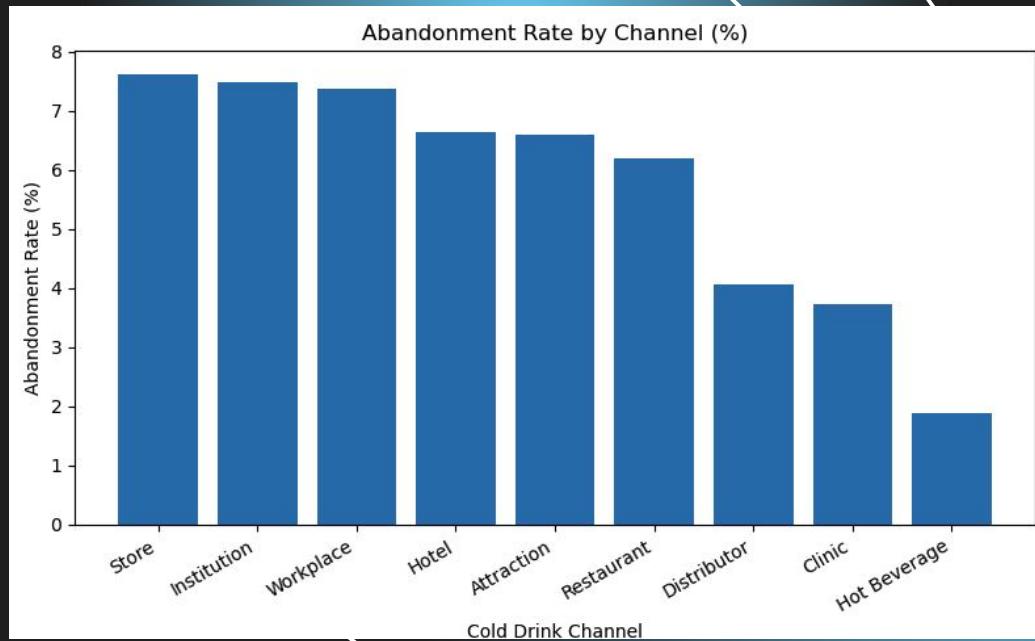
Behavior Insights

Device Patterns

- <u>Tablet highest rate</u> (8.41%)
- Mobile elevated rate (7.48%)
- Desktop most reliable (5.59%)

Channel Patterns
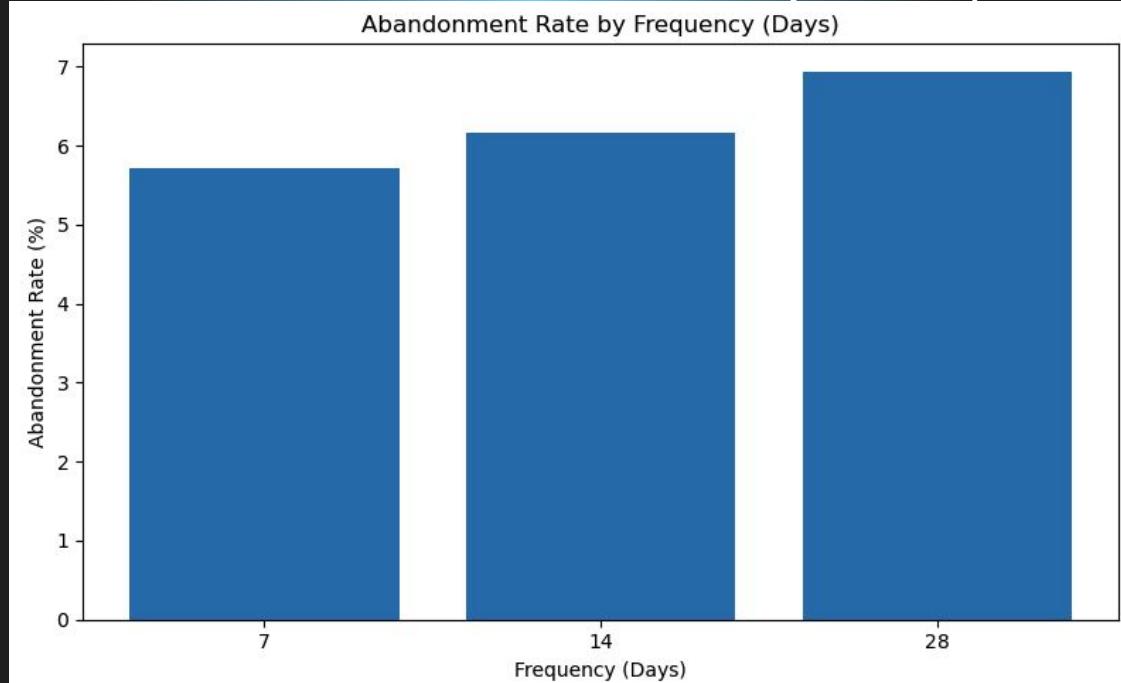
- Store
- Institution
- Workplace

Abandonment Rate by Channel (%)

Customer Insights

Order frequency pattern

- **28-day:** 6.94% (highest)

Abandonment Rate by Frequency (Days)
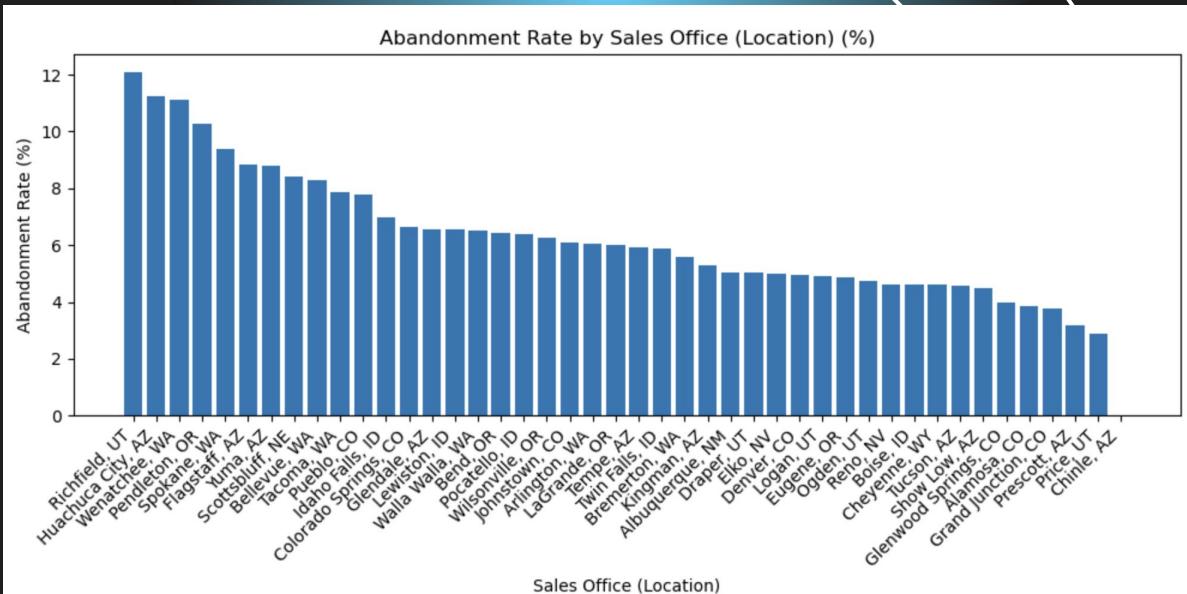
Product and Office Insights

Product Patterns

- Large packs drop more
- Manufacturing packs appear
- Special Flavors

Location Patterns

- Clear high-risk offices
- Some >10–12% abandon
- Regional variation exists

Abandonment Rate by Sales Office (Location) (%)

Key Behavioral Insights

Behaviors Before Abandonment

• No checkout started
• Many product views
• Add → no follow-up
• Remove-from-cart actions

What Happens After Abandonment
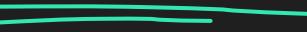
• Orders placed through other channels
• Order delayed to next cycle
• No activity for multiple windows

Window Level Model

Predicts abandonment using aggregated clickstream data, running total sales and customer data per order window

Model	Accuracy	Recall_1	F-1_Score_1	AUC
Boosted Logistic Regression	0.93	0.87	0.71	0.95
Decision Tree	0.93	0.87	0.71	0.94
Logistic Regression	0.93	0.79	0.69	0.92
LightGBM	0.92	0.87	0.7	0.9
XGBoost	0.92	0.87	0.7	0.95

Window Level Model

Top factors increasing abandonment

begin_checkout_flag_0

viewed_product_details_1

mycoke_cart_count

Top factors decreasing abandonment

begin_checkout_flag_1

view_product_details_0

total_orders_running

unique_page_views

Customer Level Model
Metrics
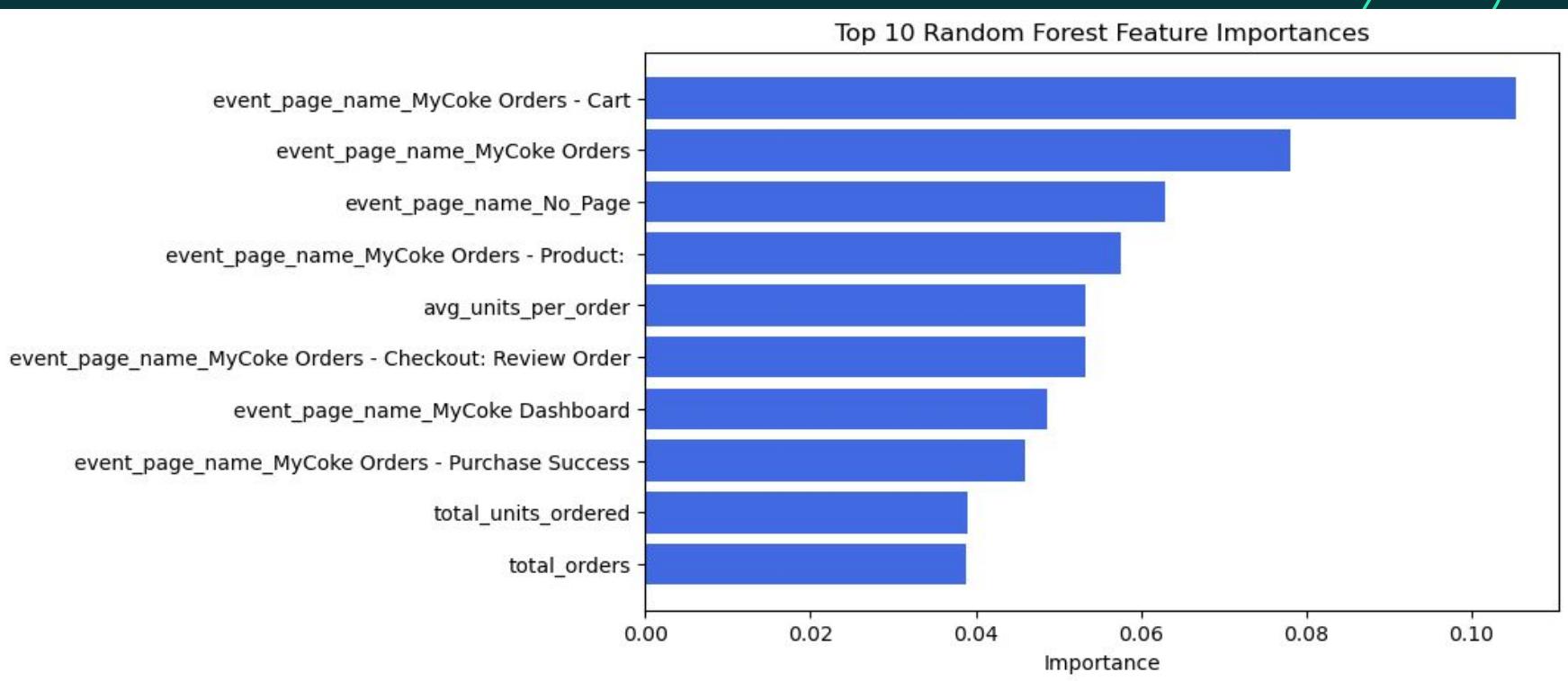
Predicts abandonment from consolidated client data

Outcome	Precision	Recall_1	F-1_Score_1
Abandon	0.79	0.48	0.58
Not Abandon	0.81	0.92	0.86
AUC			
0.868			

Customer Level Analysis
Top 10

Top 10 Random Forest Feature Importances

Customer Level Analysis

Data Lost

Customer

Windowed	Google Analytics	Sales
Customers who did not engage with carts or website.	Customers where no orders were placed in the window.	Customers where no orders were placed in the window.
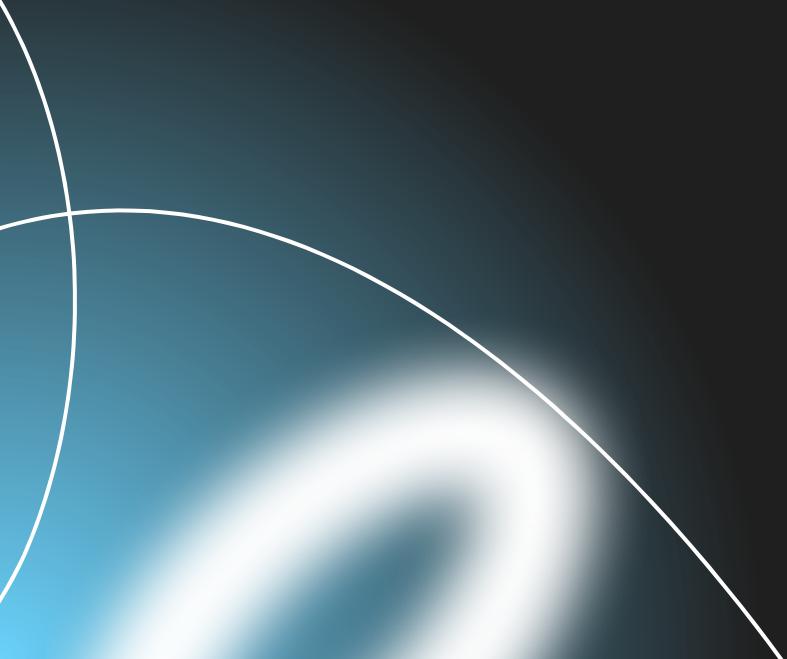
Stagnant Customers

Lessons Learned

1

The more a customer engages with the website, the more likely they are to abandon.

2

Larger order sizes are less likely to be abandoned.

3

Abandonment behavior repeats.

Financial Impact

Window-Level Summary

- Abandoned order windows: **3,092**
- Estimated revenue per unit: $26.42
- Total revenue lost: **$246,944**
- Avg value at stake per abandoned order: **$79.87**

Customer-Level Summary

- Total customers: 6,334
- Unstable customers: **1,752**
- Avg value at risk (unstable): **$134.38**

Business Opportunity Scenarios (Model + Recovery)

- 10% recovery: $21,484 potential savings
- 20% recovery: $42,968 potential savings
- 25% recovery: $53,710 potential savings
- 50% recovery: $107,421 potential savings
- 75% recovery: $161,131 potential savings
- 100% recovery: $214,841 potential savings

Suggestions

Customer

Run Monthly

Target chronic abandoners

Seasonal Contract

Order scheduling automation with incentive

Window

Run Weekly

Window Model for specific order windows

Recommendations based on similar orders in region

Suggestions

Chronic abandoners

Stable pricing for committed schedules

Contract revision

Heavy browsers with purchase

Consultation on best product mix based on alike customers from account manager

Product/preset bundles recommendations on website

Q&A

Thank you