



# INSIGHT BANK



Total Customers  
**2.0K**

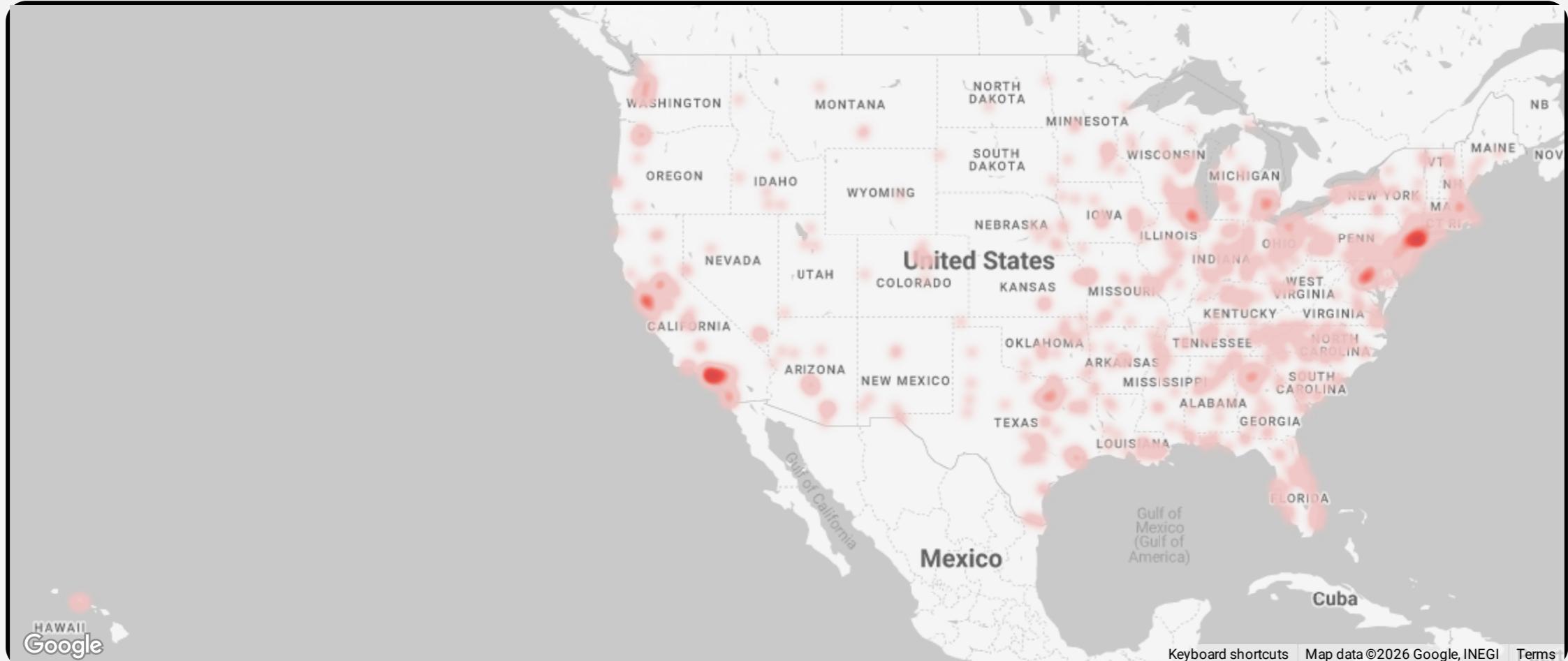
Total Transactions  
**13.3M**

Total Error  
**212.0K**

Total Amount  
**\$573.40M**

Average Credit Score  
**714.0**

## User Location Information





## State-Level Expenditure Composition

General Category	Top 5 - Users State / Total Amount / Total Percent											
	CA		TX		NY		FL		IL			
Total Amount	Total Percent	Total Amount	Total Percent	Total Amount	Total Percent	Total Amount	Total Percent	Total Amount	Total Percent	Total Amount	Total Percent	Total Percent
Travel, Transportation & Automotive	\$15.34M	2.68%	\$9.95M	1.74%	\$9.06M	1.58%	\$8.2M	1.43%	\$5.22M	0.91%		
Retail & Shopping	\$11.52M	2.01%	\$10.2M	1.78%	\$9.34M	1.63%	\$5.66M	0.99%	\$3.86M	0.67%		
Food & Dining	\$13.27M	2.31%	\$9.28M	1.62%	\$9.43M	1.65%	\$5.99M	1.04%	\$4.07M	0.71%		
Professional & Personal Services	\$10.64M	1.86%	\$6.96M	1.21%	\$6.16M	1.07%	\$5.75M	1%	\$3M	0.52%		
Home, Utilities & Construction	\$8.04M	1.4%	\$5.32M	0.93%	\$5.18M	0.9%	\$3.85M	0.67%	\$2.36M	0.41%		
Health & Medical	\$6M	1.05%	\$5.31M	0.93%	\$4.38M	0.76%	\$2.84M	0.49%	\$2.17M	0.38%		
Entertainment & Recreation	\$2.99M	0.52%	\$2.59M	0.45%	\$2.42M	0.42%	\$1.43M	0.25%	\$808.34K	0.14%		
<b>Grand total</b>	<b>\$70.73M</b>	<b>12.34%</b>	<b>\$51.58M</b>	<b>9%</b>	<b>\$47.74M</b>	<b>8.33%</b>	<b>\$34.79M</b>	<b>6.07%</b>	<b>\$22.24M</b>	<b>3.88%</b>		

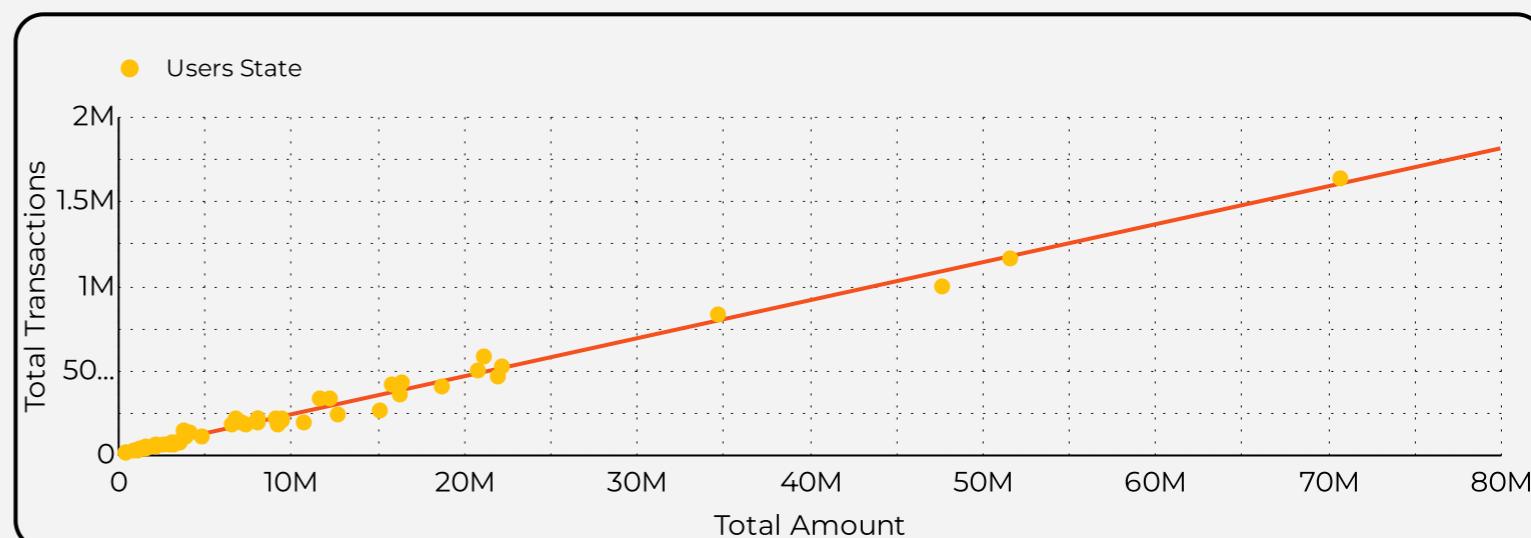
Top 5 State Volume Share  
**39.60%**

- California
- Texas
- New York
- Florida
- Illinois

Top 4 Sector Revenue Share  
**70.51%**

- Travel, Transportation & Automotive
- Retail & Shopping
- Food & Dining
- Professional & Personal Services

## Transaction Count vs. Amount by State





# MARKET SEGMENTATION: HIGH VS. LOW DIGITAL ENGAGEMENT

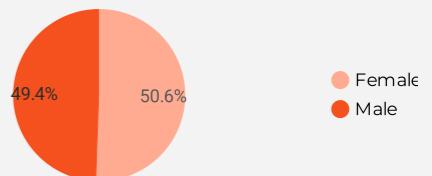


Avg. Credit Score  
713.9

Avg. Customer Age  
50.9

Avg. Amount  
\$50.02

Total Transactions  
482.1K



## High Digital Adoption Profile (Top 10)

Vermont

Delaware

Tennessee

New Jersey

Connecticut

South Carolina

Kentucky

Florida

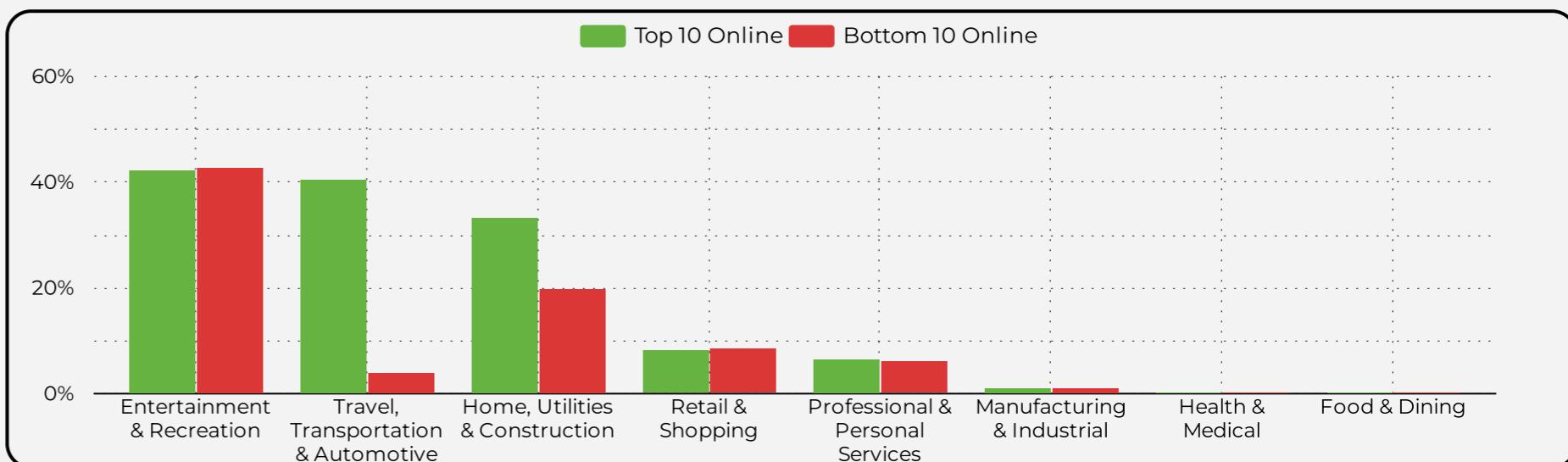
Georgia

Alabama

## Geographic Distribution of Top & Bottom Perf...



## Expenditure Habits by Digital Adoption Segment

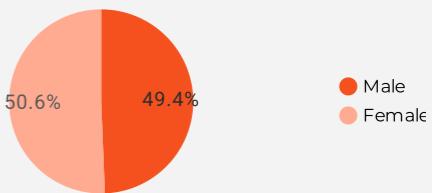


Avg. Credit Score  
727.3

Avg. Customer Age  
52.2

Avg. Amount  
\$82.71

Total Transactions  
50.9K



## Low Digital Adoption Profile (Bottom 10)

Nevada

Mississippi

Montana

Louisiana

Iowa

Colorado

Kansas

Nebraska

Arkansas

District of Columbia



# TRAVEL REVENUE & DISTANCE ANALYSIS

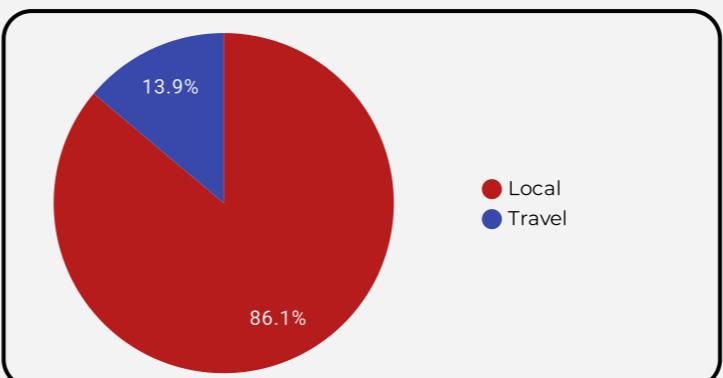


Total Travel Revenue  
**94.9M**

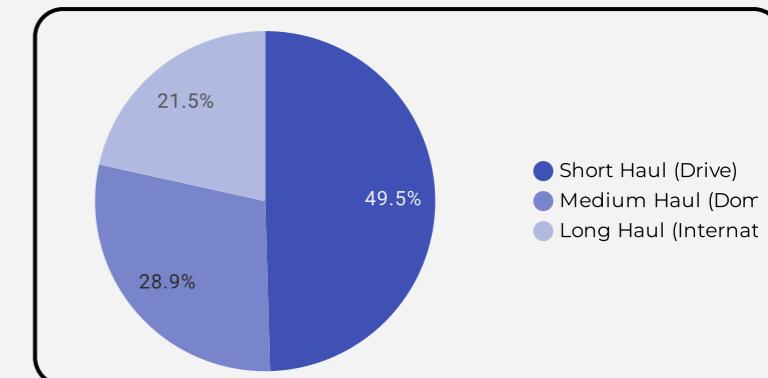
Avg. Customer Age  
**54.7**

Share of Total Revenue  
**16.5%**

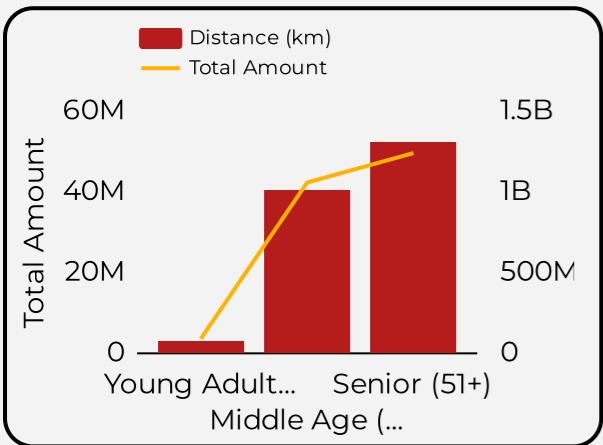
## Local and Travel Distribution



## Travel Type Distribution



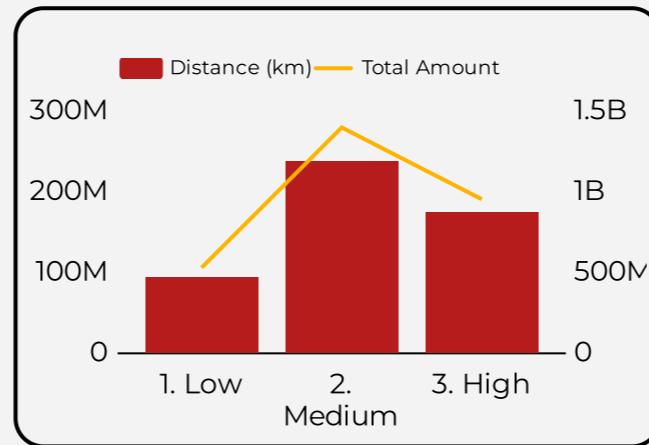
## Generational Travel Trends



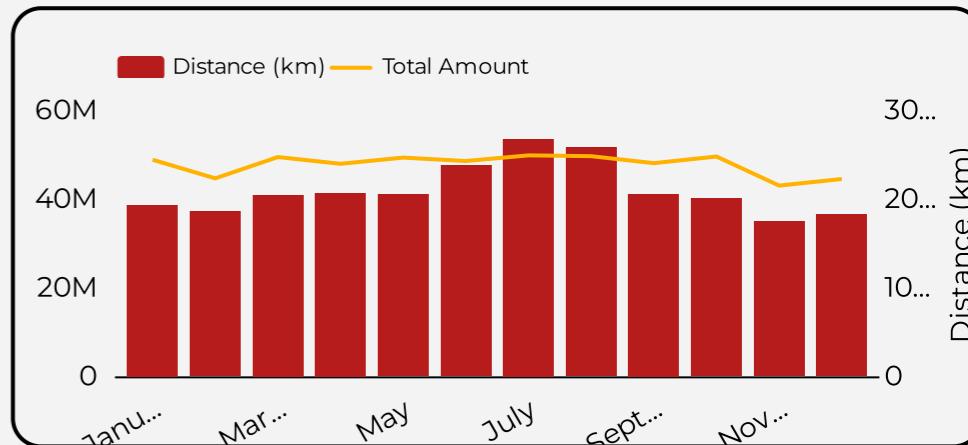
## Spend & Dist. | Gender



## Spending by Credit Score



## Seasonal Travel & Revenue Trends



## Category Breakdown by Channel

In-Store / Local Spending

Travel, Dining & Leisure

Wellness & Services

Shopping & Retail

Home & I...

Online Channel Spending

Travel, Dining & Leisure

Home & Improvement

Shopping & Retail

Welln...

Travel-Specific Spending

Home & Improvement

Travel, Dining & Leisure

Shopping & Retail

Wellness & Services



# CONSUMER SPENDING & MERCHANT INSIGHTS



Total Active Customers  
1.2K

Total Transactions  
13.3M

Total Amount  
\$573.40M

Avg. Customer Age  
54

[Reset Filters](#)

Merchant State

Transaction Date

## Merchant Location Distribution



### General Category (Exclude)

- Travel, Transportation & Automotive
- Retail & Shopping
- Professional & Personal Services
- Manufacturing & Industrial
- Home, Utilities & Construction
- Health & Medical
- Food & Dining
- Entertainment & Recreation

## Detailed Transaction Log

User ID	Merchant State	Merchant City	Category Name	Transaction Date	Total Amount
708	NY	Staten Island	Furniture, Home Furnishings, and Equipment S...	Sep 22, 2010	6,820.2
1259	CT	Wilton	Antique Shops	Apr 10, 2012	5,913.37
1259	CT	Stamford	Electronics Stores	Nov 13, 2014	5,654.5
708	NY	New York	Furniture, Home Furnishings, and Equipment S...	Jan 13, 2019	5,591.73
708	AL	Louisville	Steel Drums and Barrels	Mar 24, 2010	5,545.68
1259	CT	Wilton	Music Stores - Musical Instruments	Jun 7, 2014	4,747.97
96	CA	Yorba Linda	Wholesale Clubs	Jun 13, 2011	4,685.23



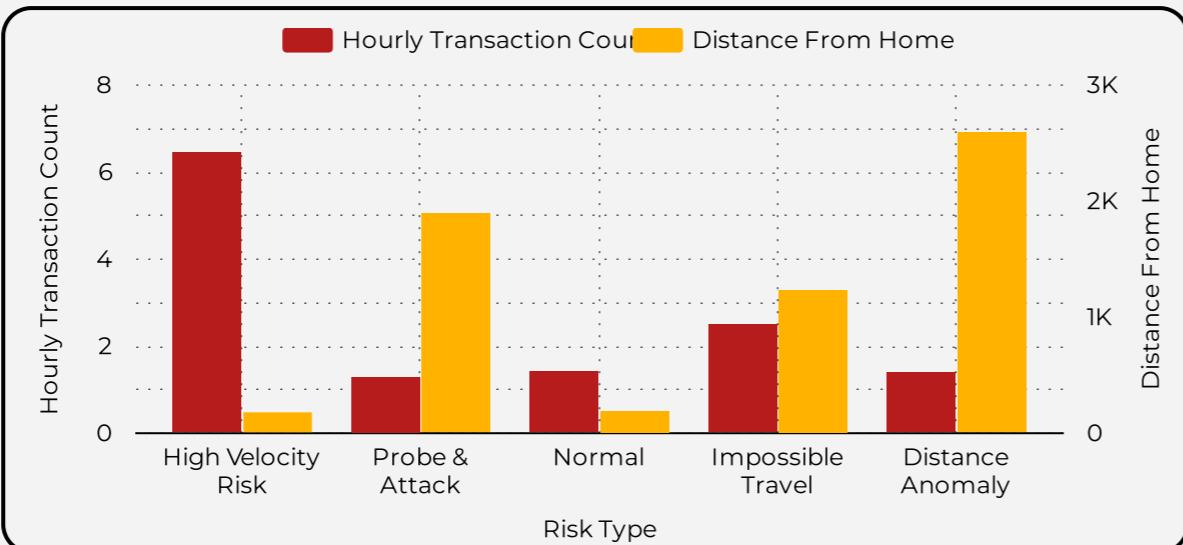
# DISTANCE-BASED FRAUD DETECTION



Avg. Distance (Risk)  
**1.7K**

Avg. Distance (Normal)  
**182.0**

## Risk Indicators: Velocity vs. Distance

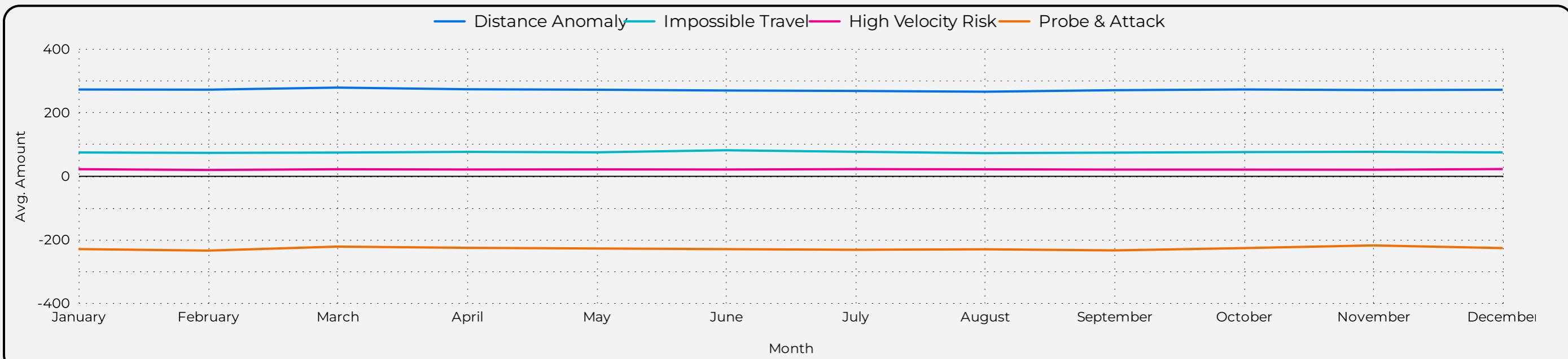


## FRAUD DETECTION LOGIC

Risk Type	Trigger Condition
Impossible Travel	> 500km location jump in < 1 hr
Probe & Attack	< \$5 txn followed immediately by > \$200 txn
Distance Anomaly	> 500km from home & > 3x avg spend
High Velocity Risk	6+ transactions within 1 hr



## Fraud Trends Over Timeline (Monthly/Hourly)





# MACHINE LEARNING: FRAUD DETECTION



MODEL  
**XGBoost**

ROC-AUC  
**%99**

## Extract-Transform-Load

12GB RAM

CSV

PARQUET

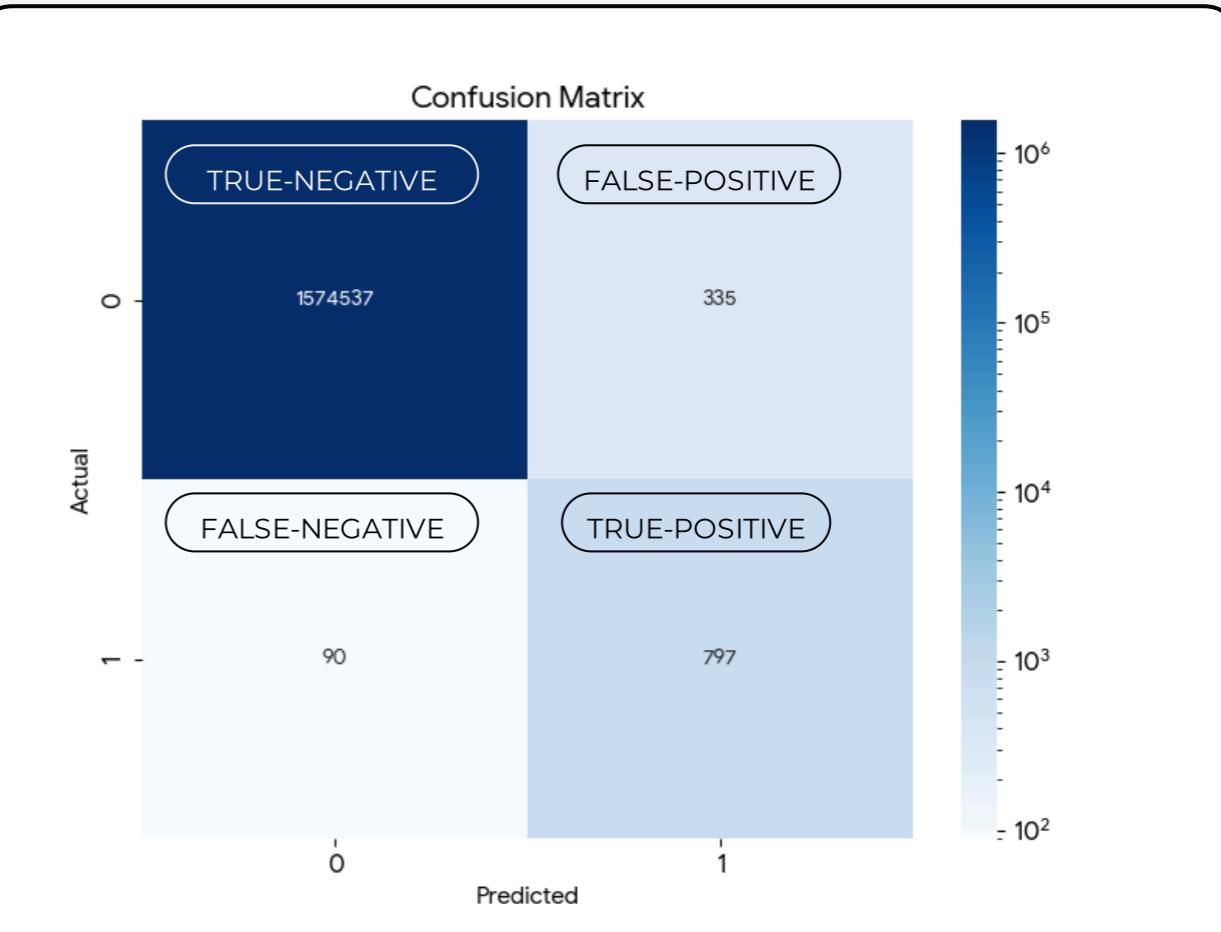
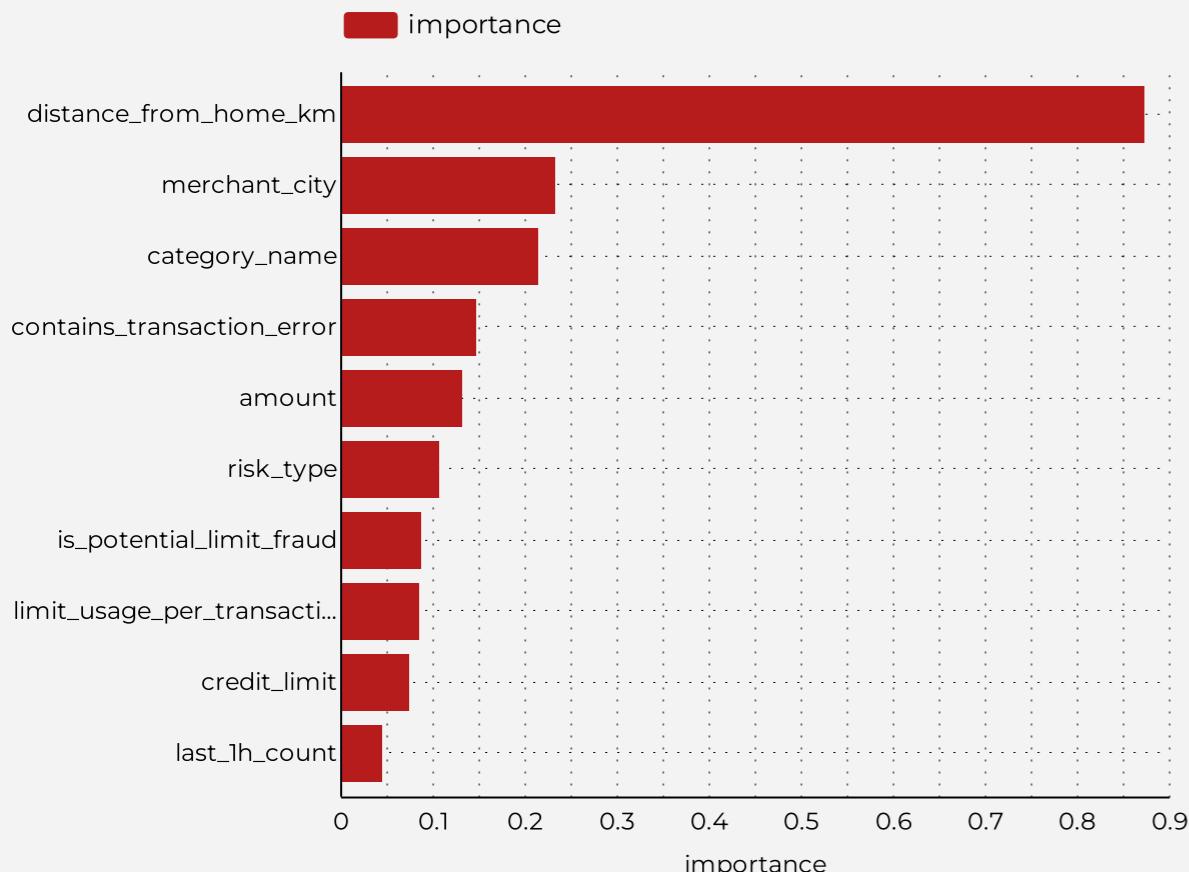
PANDAS

POLARS

RECALL  
**%90**

PRECISION  
**%70**

## importance by feature





**INSIGHT  
BANK**