

CARmax

Analytics Showcase

Team Maxx



CARmax®

MEET THE TEAM



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CARMAX
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TRUSTED GUIDE
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ROLE - STORYTELLER



AGENDA



01
**STRATEGY
OVERVIEW**



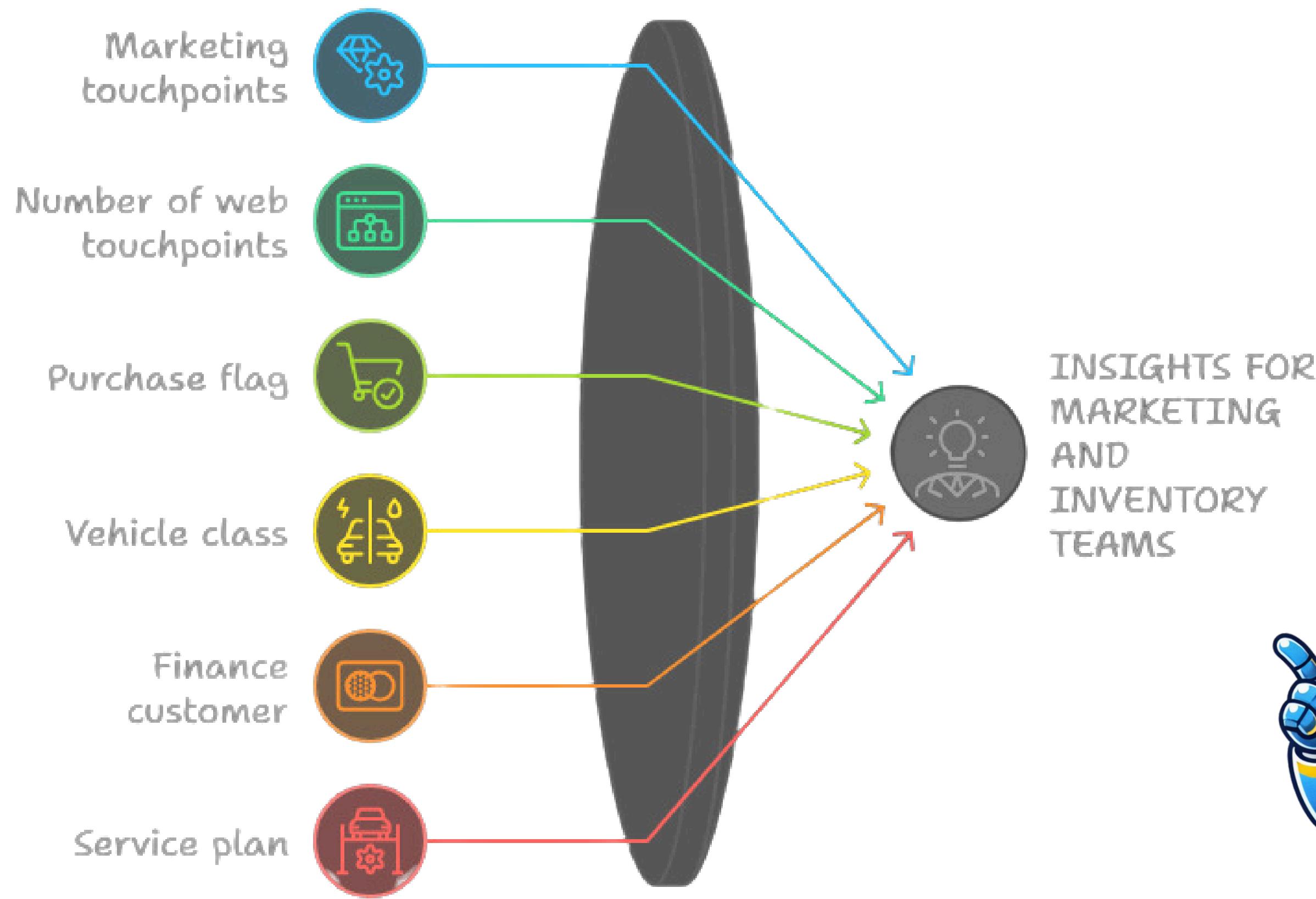
02
**PROCEDURE
ANALYSIS**



03
RECOMMENDATIONS



VARIABLES CONSIDERED FOR ANALYSIS



METHOD(S) OF ANALYSIS



METHOD(S) OF ANALYSIS

Recommendation/Action points

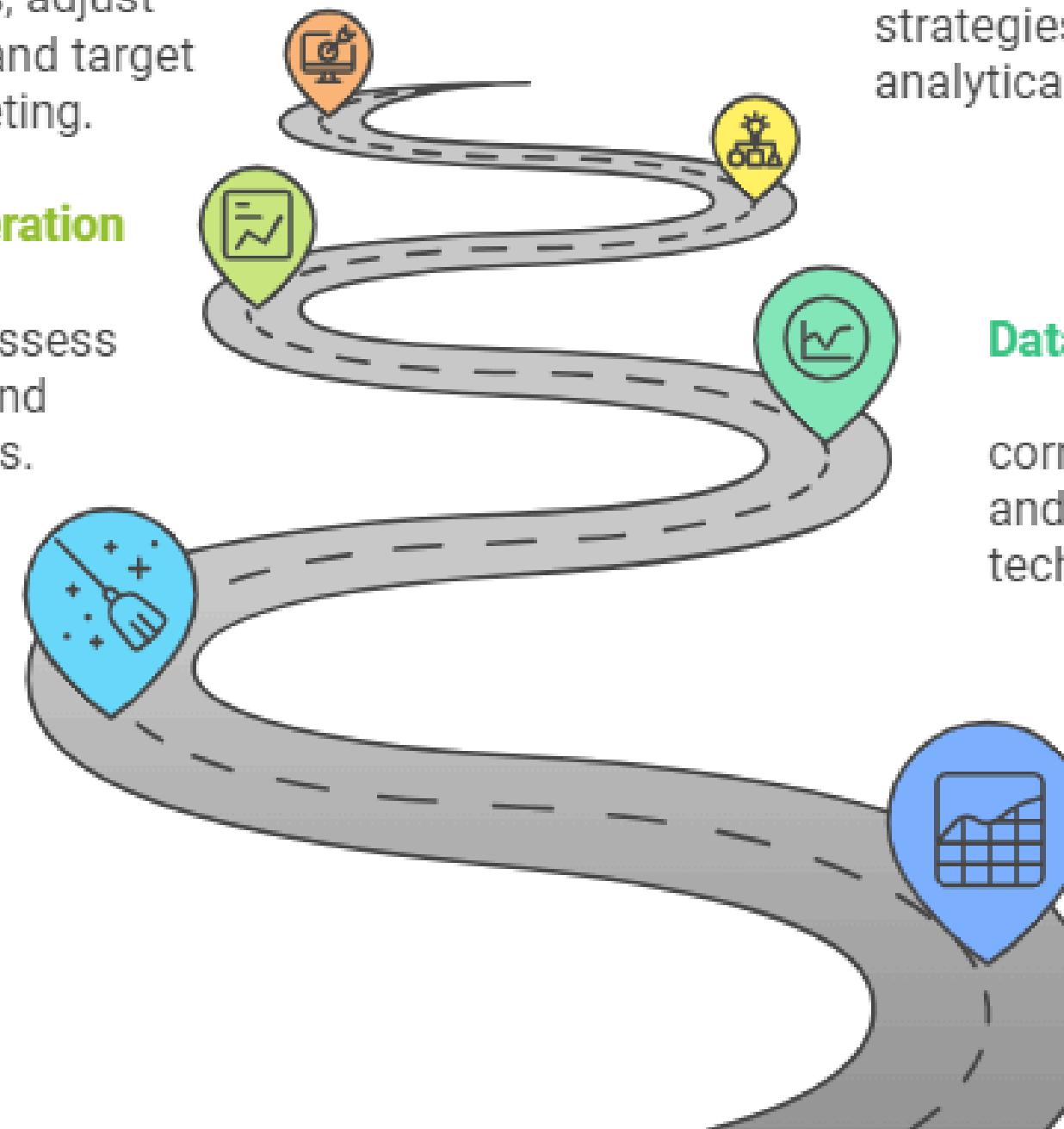
Pinpoint new store locations, adjust inventory, and target marketing.

Insight Generation

Identify key states, assess finance impact, and evaluate trade-ins.

Data Cleaning

tidyverse for data manipulation.



Strategy Formulation

strategies based on analytical insights.

Data Analysis

correlation, regression, and clustering techniques.

Data Collection

Tools: data table for efficient data loading.

ANALYSIS

WEB TRAFFIC AND PURCHASE RATE ANALYSIS

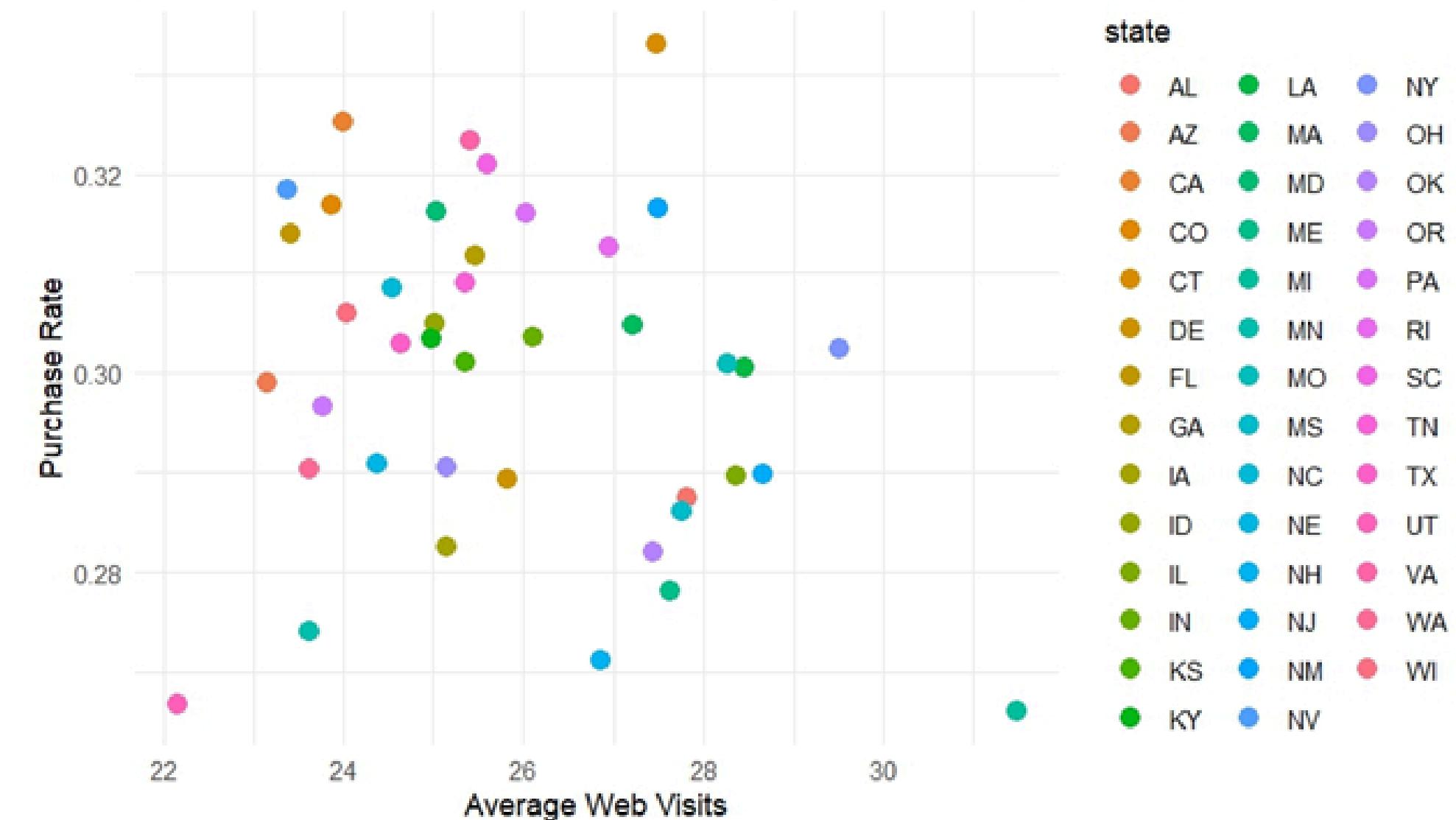
Methodology: Correlation analysis, web visits, purchase rates

Rationale: Web traffic, purchase rates, marketing strategies

Key Insights:

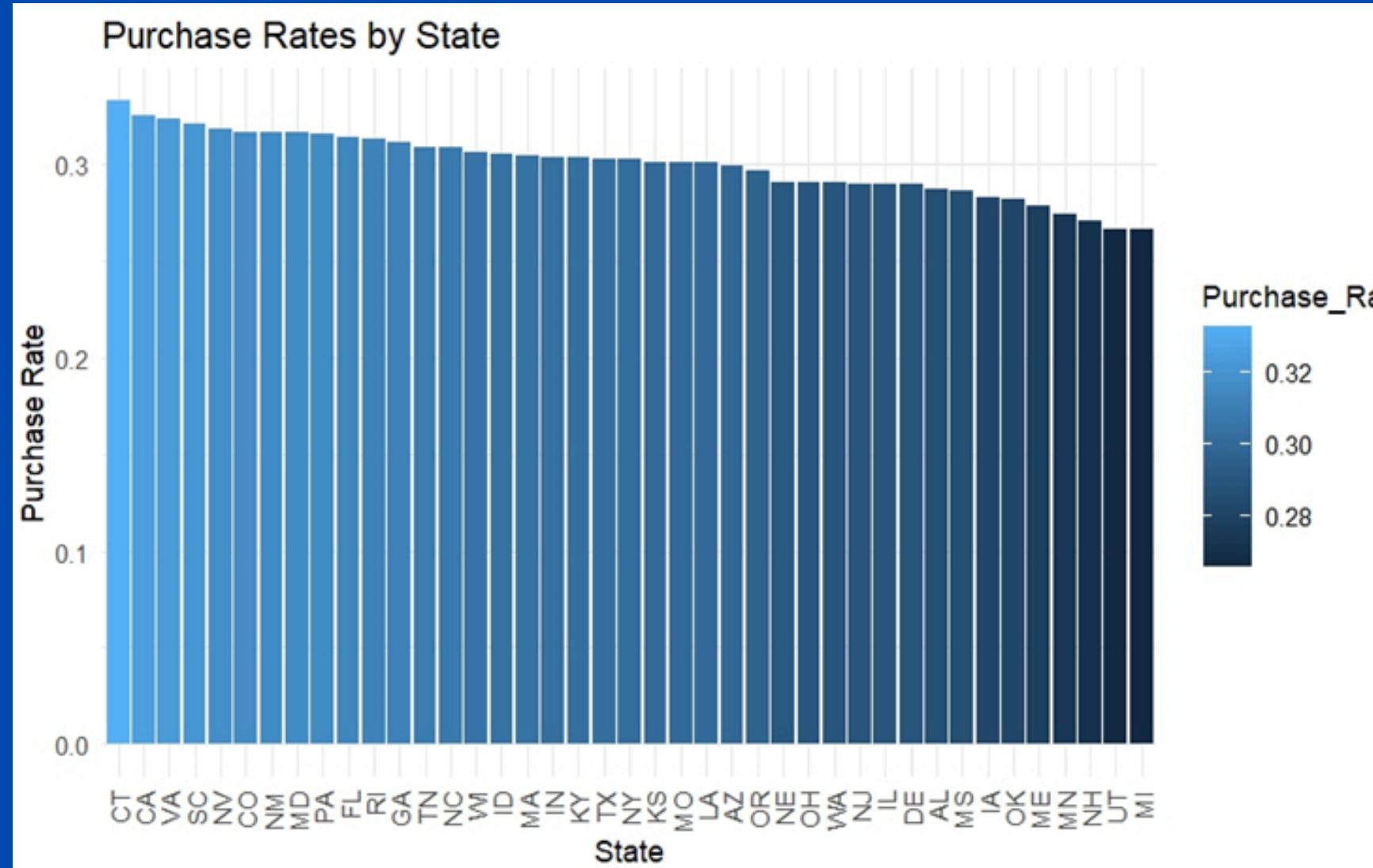
- High Conversion: 28+ visits, ~0.32 purchase rate
- Optimization Opportunity: 70K+ visits, ~0.30 purchase rate

Relationship between Web Visits and Purchase Rates by State



ANALYSIS

PURCHASE RATES BY STATES



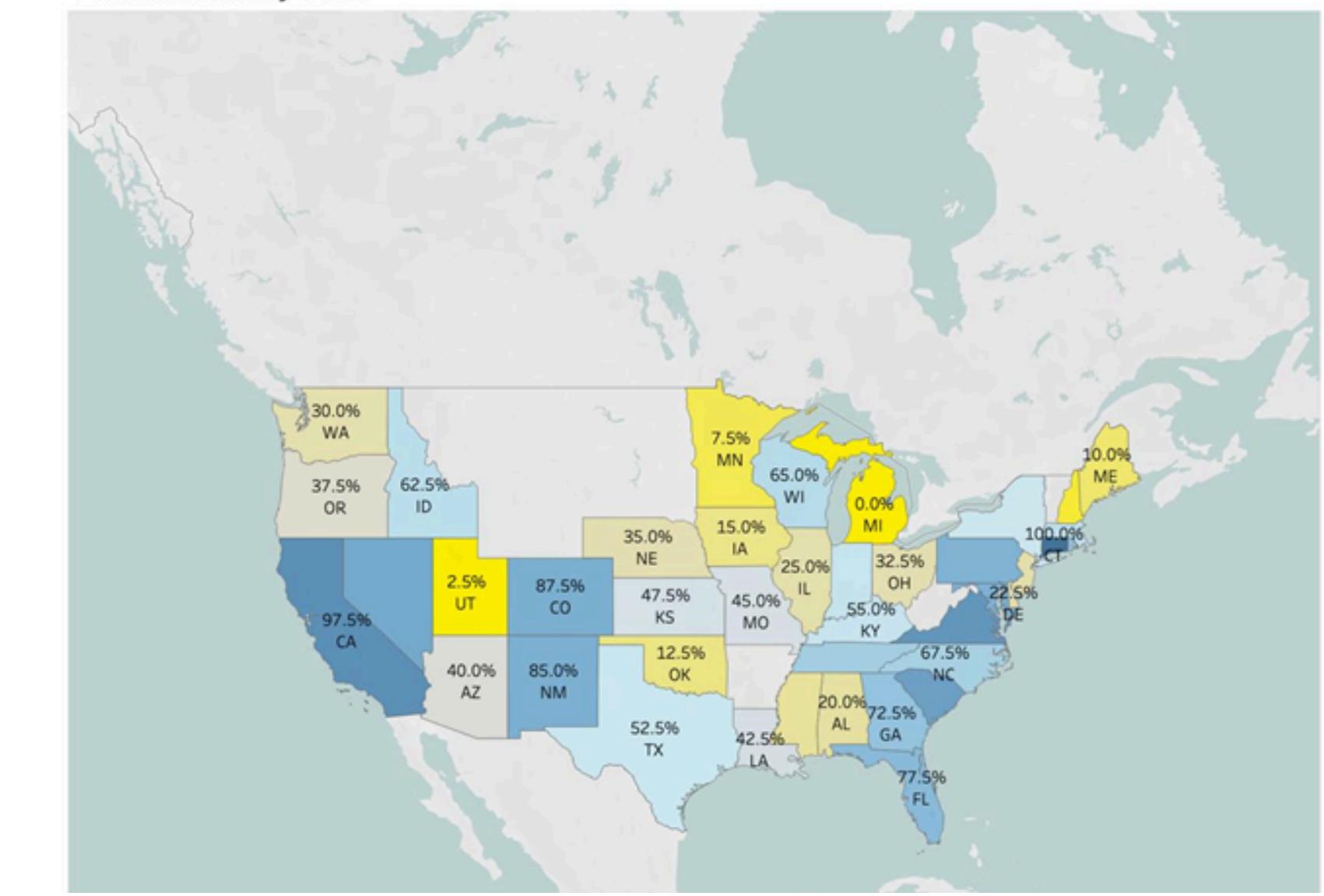
Methodology: State-specific purchase rate analysis

Rationale: Regional performance insights guide targeted marketing and inventory strategies. Customizing approaches based on state-specific data helps boost underperforming areas and maintain high-performing regions.

Graph: Purchase Rates by State



Purchase Rate by State



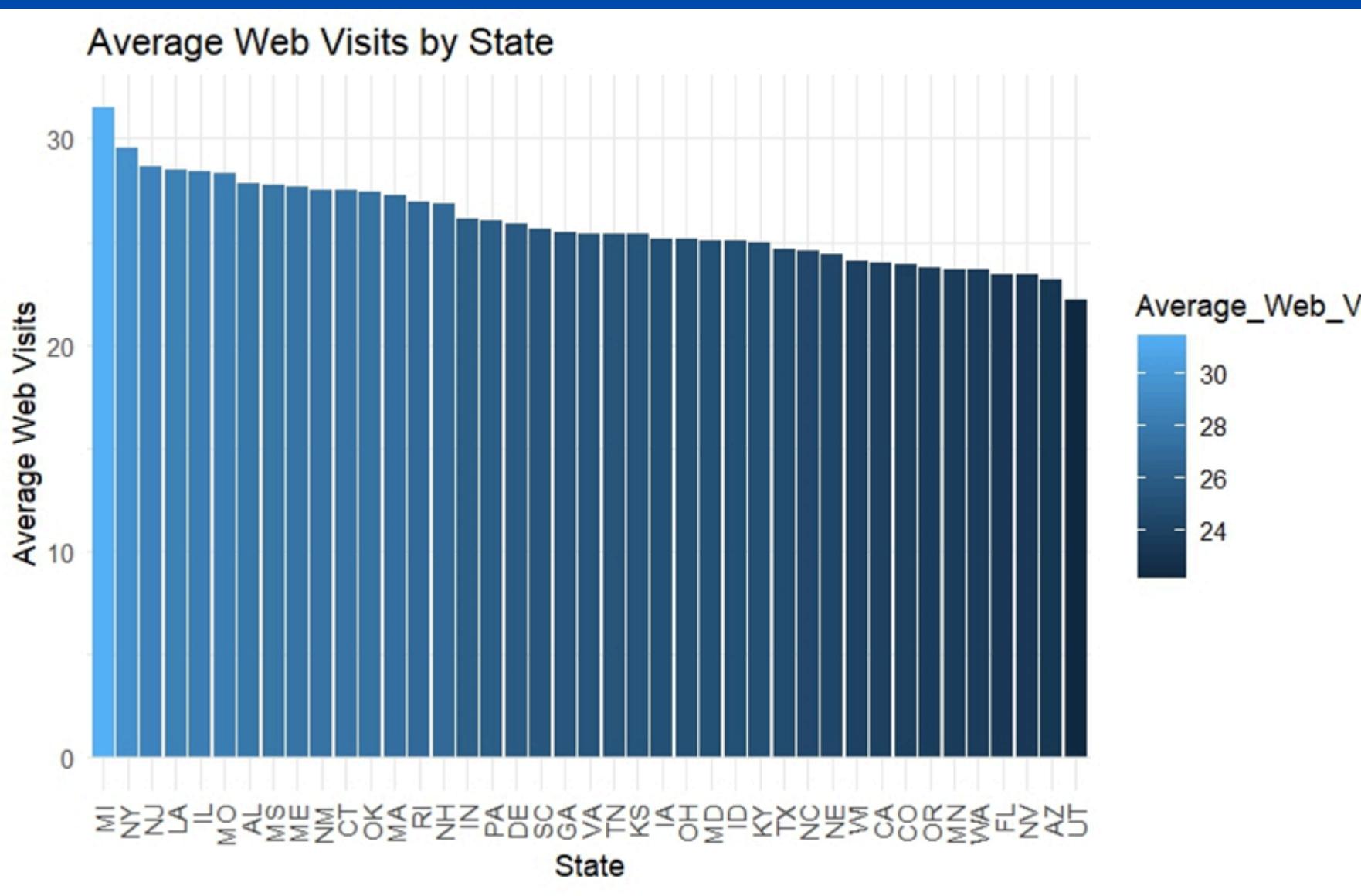
Key Insights:

High Purchase Rates: Texas, Florida - peak at ~0.32. Strong potential for inventory and sales focus

Low Purchase Rates: Ohio, Illinois - around ~0.28. Need for improved marketing and promotions to drive sales.

ANALYSIS

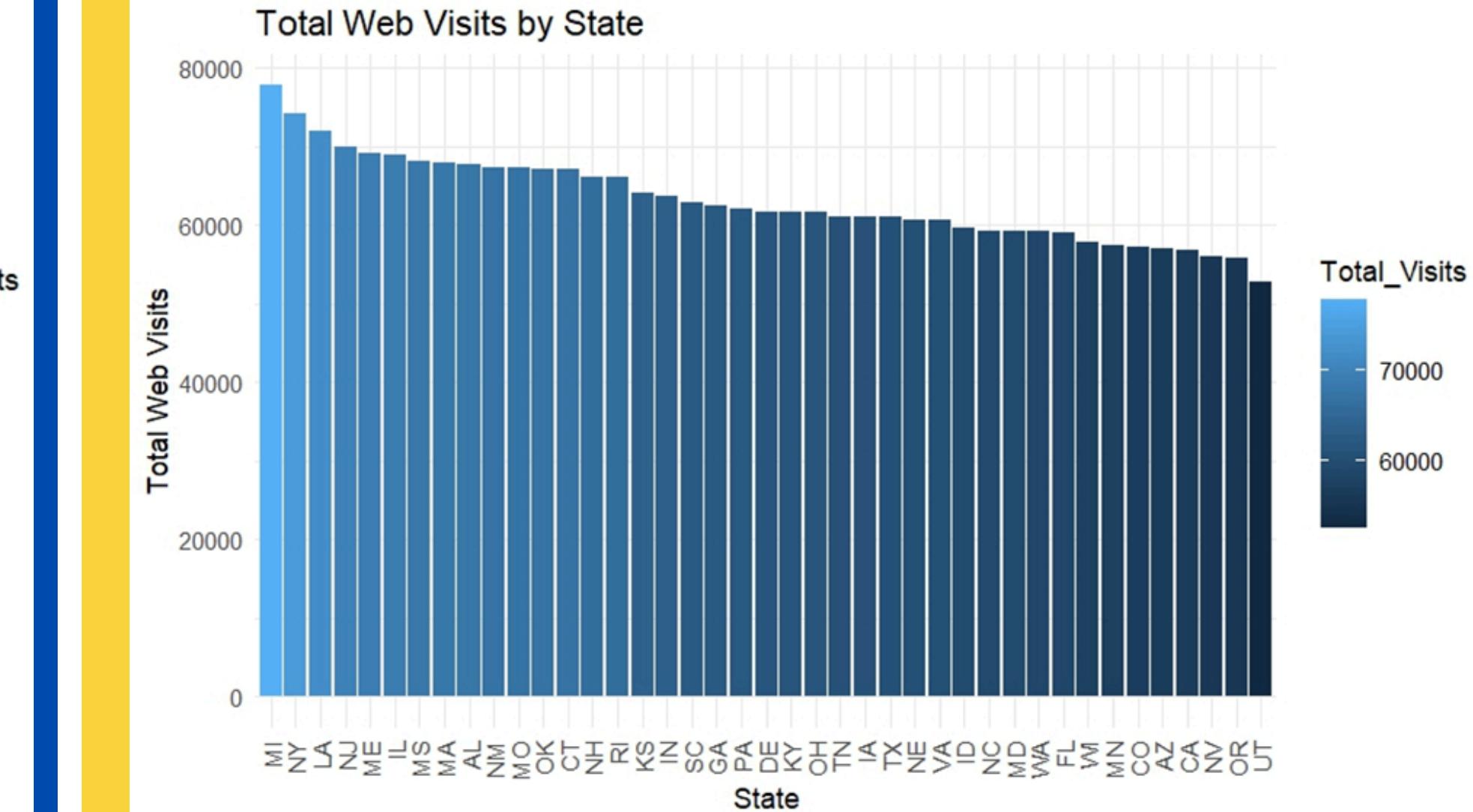
ANALYSIS OF TOTAL WEB VISITS BY STATE



Methodology: Aggregates total web visits by state to assess market activity and engagement.

Rationale: Identifying web traffic volume by state reveals areas of high engagement and potential markets, guiding marketing and store placement decisions.

Graph: "Total Web Visits by State" bar graph



Key Insights

California's Market Dominance: ~70,000 visits, indicating a highly active and engaged customer base.

Potential Growth Markets: Idaho, Utah - ~20,000 visits each, suggesting opportunities for brand expansion and increased marketing efforts.

ANALYSIS

IMPACT OF FINANCING OPTIONS ON PURCHASE DECISIONS

Methodology: Statistical analysis of finance customers and vehicle class preferences.

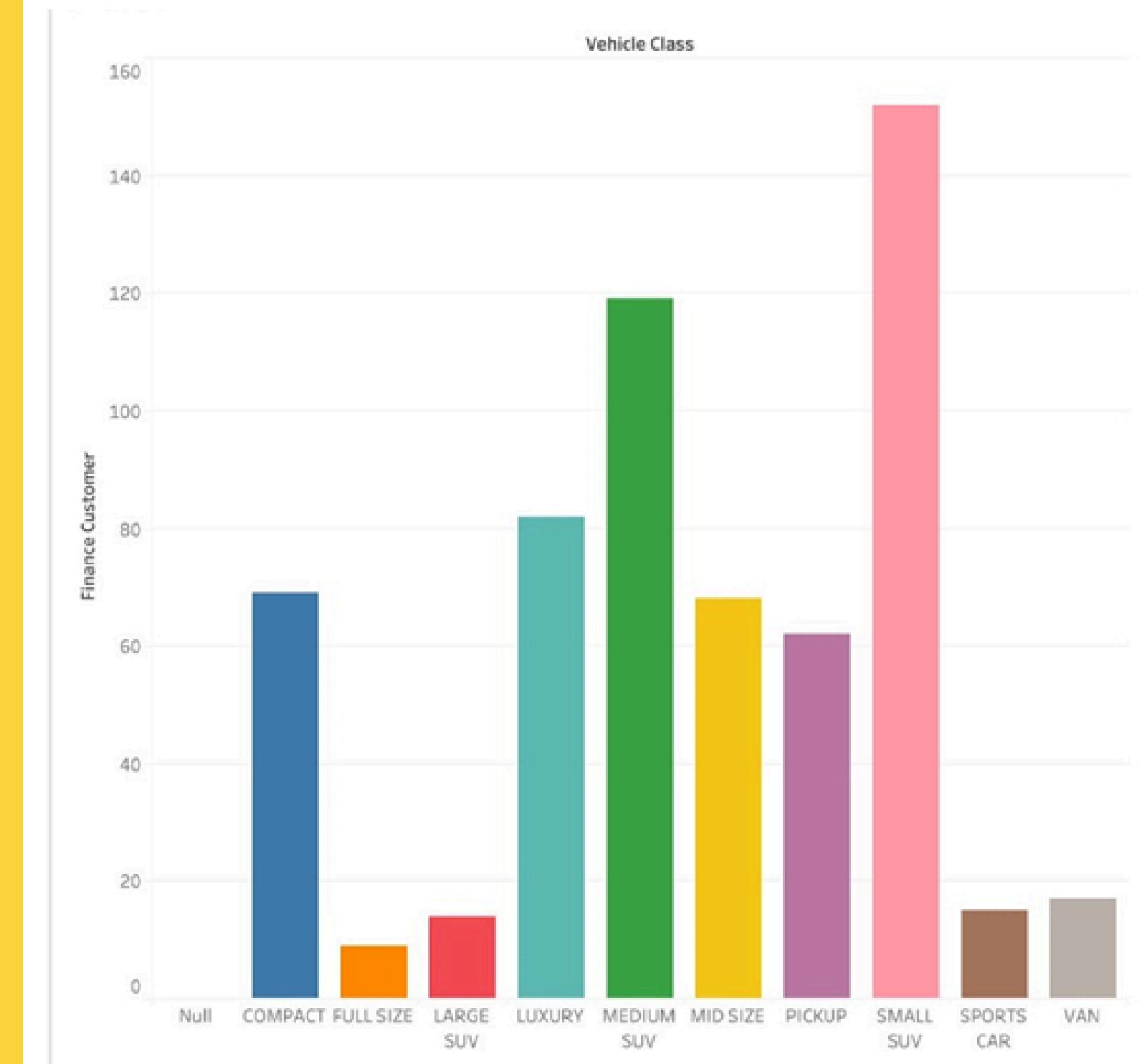
Rationale: Financing impacts buyer behavior, especially across different vehicle segments, guiding decisions on financing options.

Graph: "Finance Customers by Vehicle Class" bar graph

Key Insights:

High Engagement in Premium Segments: Luxury vehicles (~150) and pickups (~140) show strong engagement with financing.

Effective Financing Strategies: California leads with 607 finance customers, correlating with high luxury vehicle purchases.



ANALYSIS

TRADE-IN PROGRAMS AND THEIR IMPACT ON SALES

```
print(trade_in_summary)
```

A tibble: 2 × 5

trade_in_customer	Count	Percentage	Avg_Web_Visits	Purchase_Rate
0	78712	78.7	25.8	0.277
1	21288	21.3	26.1	0.384

Methodology: Analyzed the proportion of trade-in customers vs. purchase rates to assess trade-in program effectiveness.

Rationale: Trade-in programs incentivize new purchases by lowering upfront costs, making it crucial to assess their impact on sales and customer retention.

Key Insights:

Enhanced Sales Through Trade-Ins: Ohio and Illinois - trade-in customers show higher purchase rates (38.4%) vs. non-trade-in (27.7%). Highlights trade-in program effectiveness.

Opportunity for Expansion: Regions with trade-in rates below 21.3% offer potential to expand trade-in programs and boost sales.



ANALYSIS

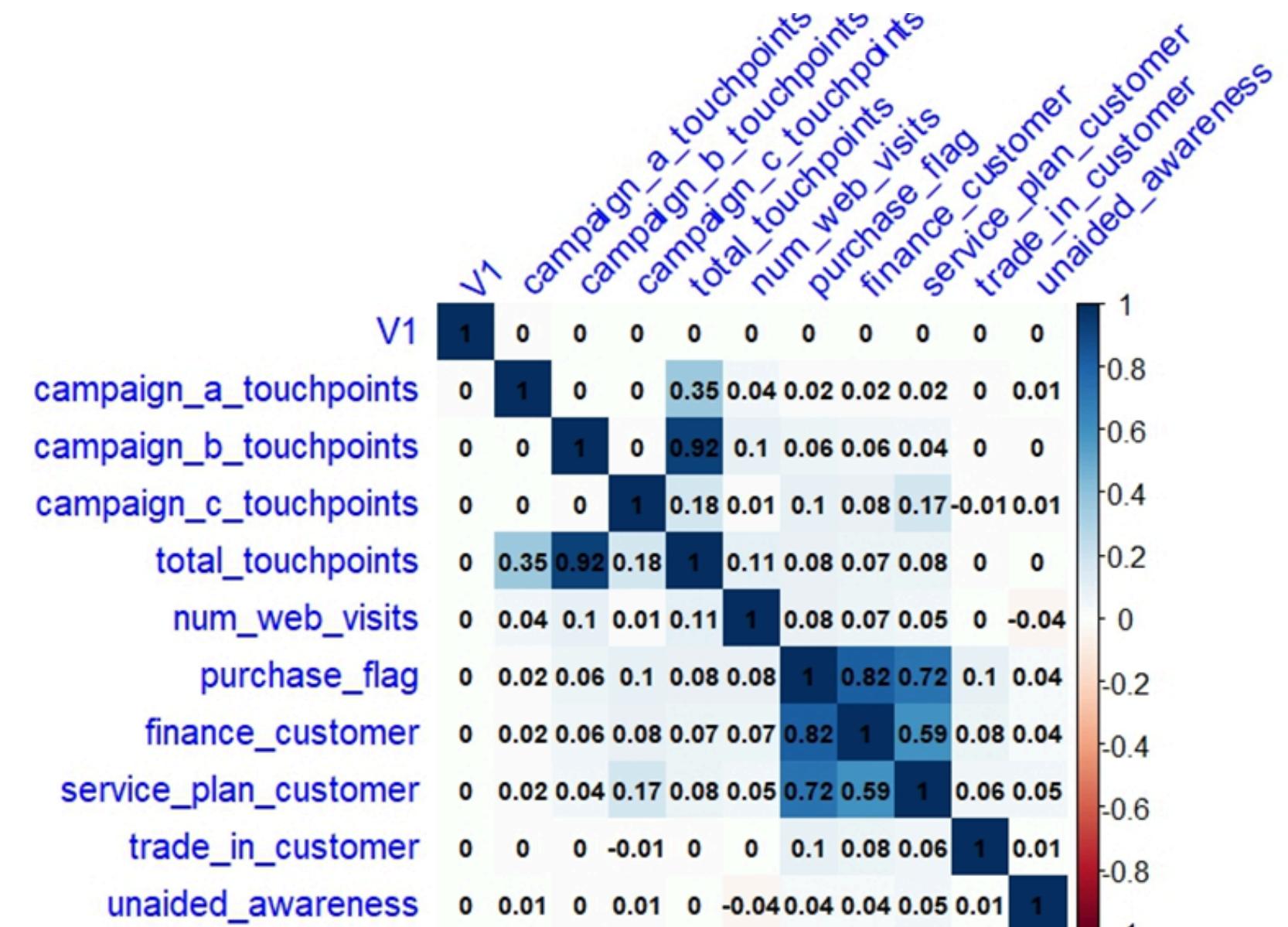


ANALYZING UNAIDED AWARENESS IMPACT ON WEB TRAFFIC AND SALES

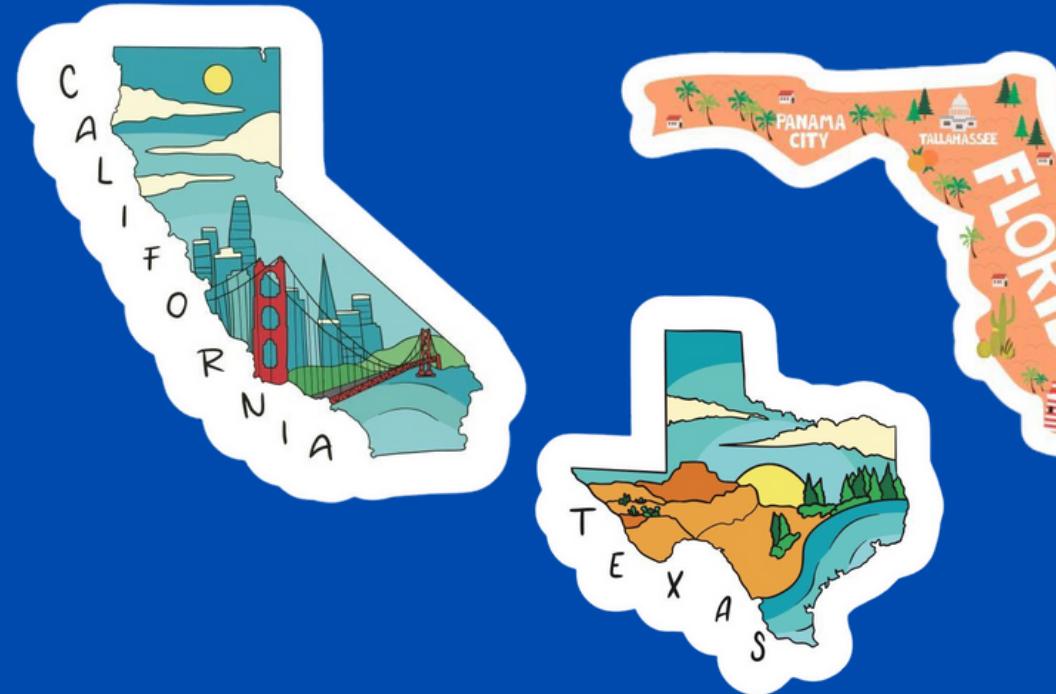
- **Methodology:** Correlation analysis of unaided awareness, web visits, and purchase rates.
- **Rationale:** Assess natural brand recall and its impact on engagement without advertising prompts.
- **Graph:** Correlation Matrix of unaided awareness, web visits, and purchase rates.

Key Insights:

- **Low Influence on Traffic:** Weak correlation between unaided awareness and web visits.
- **Campaign Opportunity:** Modest correlation (~0.1) suggests potential to improve awareness through targeted marketing.



RECOMMENDED FOR STORE OPENINGS



Web Visits: Above 28 visits



Purchase Rate: ~0.32



Strategy: Increase digital marketing, match inventory to demand.

CAUTIOUS CONSIDERATIONS



Web Visits: High traffic, but low conversion (~0.28)



Strategy: Revamp marketing, flexible inventory.



Why Caution: Misaligned strategies with local demand.

NOT RECOMMENDED



Web Visits: 25-26 average visits



Purchase Rate: Below 0.30



Strategy: Community engagement, broader product range.

Why Not: Market isn't ready for expansion.

**Thank You
for your attention**