XYZ Kicks

Strategic Marketing Analysis

For Improve Effectiveness

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Agenda

1. Business Context
2. Analytical Framework
3. Data Assumptions
4. Data Analysis
5. Key Takeaways
6. Future Directions
7. Questions/Comments

XYZ Kicks

Business Context

XYZ Kicks aims to improve marketing effectiveness to drive high-quality customers to the company's website

Business Scenario:

- XYZ Kicks serves as an online footwear retailer
  - Marketing team aims to attract "high-quality customers" to explore product offerings
  - Variety of marketing channels/techniques to drive web visitors
- Data source consist of 2 datasets
  - ***Pageviews table*** - Valuable information about website interactions (events data)
  - ***Funnel table*** - Customer journey through the online sales funnel (sales funnel data)
  - Schema/data dictionary available upon request

Project Objectives:

- Summary of historical effectiveness of strategies and time periods of high marketing effectiveness
- Identify meaningful insights, trends, and correlations to improve marketing effectiveness

Analytical Framework

Leveraged data aggregation and segmentation methods to draw summary insights and identify key opportunities

Reviewed, pre-processed and cleaned datasets

- Ensure data integrity and having better context for analysis

Transformed key features on datasets

- Define key metrics relative to business objectives

Analyzed and created data visualizations

- Calculate and visualize insights using aggregation and segmentation

Applied business understanding of objectives for key takeaways

- Evaluate marketing effectiveness and identify opportunities within sales funnel pipeline

Data Assumptions

Table Relationship Assumptions:

- Each customer in ***funnel*** has visited the page and has relationship with ***pageviews*** **(**customer_id)
- Direct relationship with IP Address in both tables (***funnel*** - ip_address, ***pageviews*** - ip)

Data Findings (Merge Issues):

- Missing Customers in Pageviews Table
  - **3280** customers **(38.3%)** not linked to ***pageviews***
- Negative Visitor/Cart Duration via IP Relationship
  - **1066** customers **(12.5%)** w/ negative visitor-cart duration
- Pageview Integrity (Duplicate Landing Pages)
  - Pageviews w/ same session_id + timestamp but multiple landing pages

Directions Taken:

- Defined "effectiveness" metrics for each table independently, without merging any tables
- To ensure pageview integrity, created distinct **"pageview_id"** using sequential + concatenation methods across associated columns

Data Analysis (KPIs)

Effectiveness Definition:

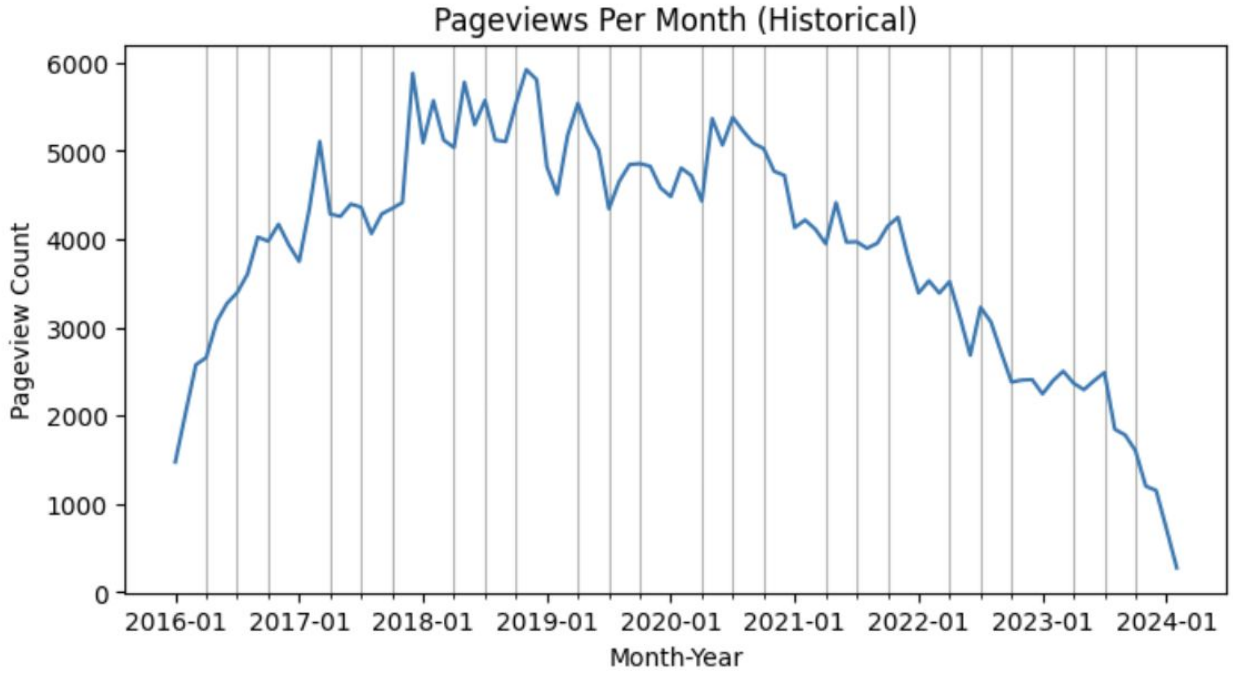
- Effectiveness: attract and retain high-quality customers
  - ***Engagement*** - customers actively interacting with the website (website traffic)
  - ***Conversions*** - customers make a first-time purchase, indicating a successful conversion to paying customer
  - ***Retention*** - customers who make a first purchase are retained over time and potentially make repeat purchases

Key Metrics:

- High-level summary, over time and categorical segments:
  - **Total Pageviews/Percentage Share (via segments)** - count of all page view events
    - **COUNT(Pageview ID), Conditional Page Views/Total Pageviews * 100**
  - **Average Session Duration** - average duration of website sessions (in seconds)
    - **AVG(Session End Time - Session Start Time)**
  - **Conversion Rate (via sales funnel)** - % of carted customers who make a purchase
    - **(Number of Customers with Purchase) / (Number of Website Visitors) * 100**

Total Pageviews

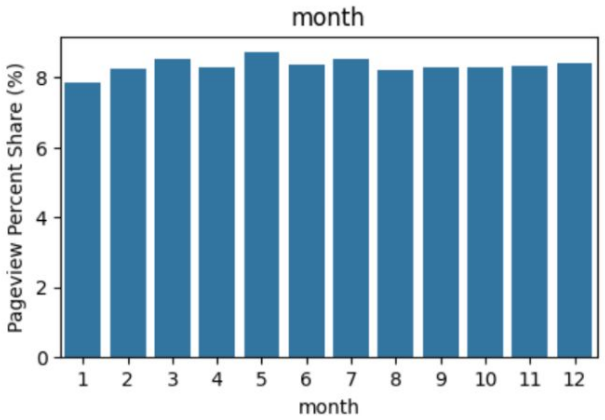
Data Analysis (Total Pageviews Per Month - Historical)

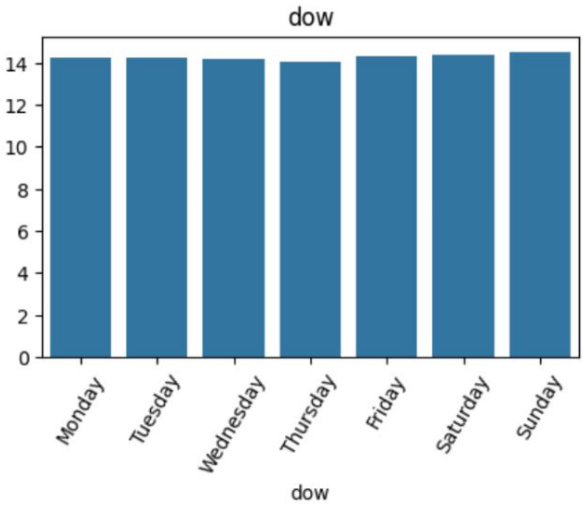


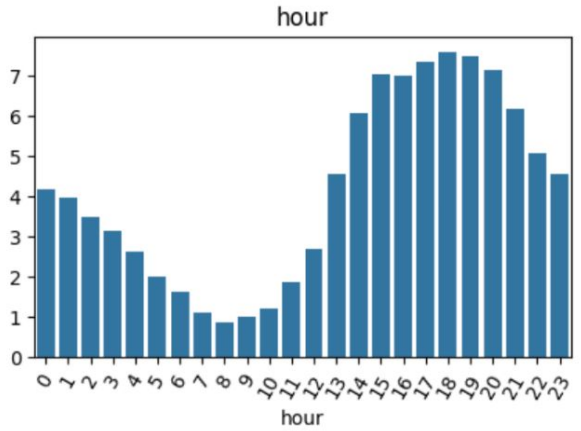
Takeaways:

- Historical monthly average views @ **~3919.1 page views**
- Previous year **(2023)** averaged at an all-time low in monthly pageviews @ **~2024.1 page views** (**-48.1%** of historical avg)

Data Analysis (Total Pageviews by Time - Seasonal)



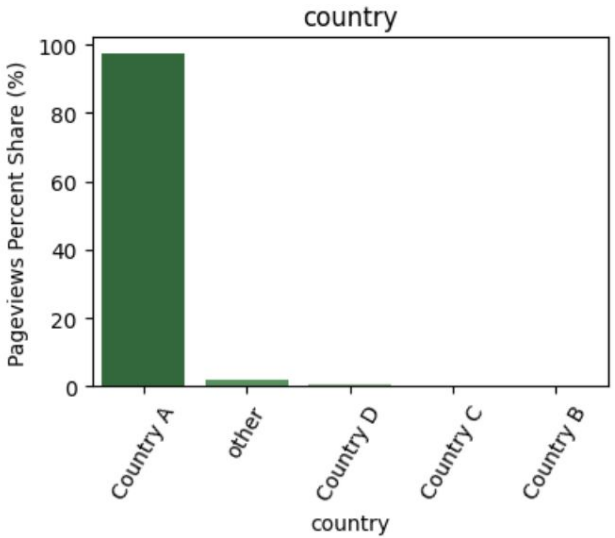


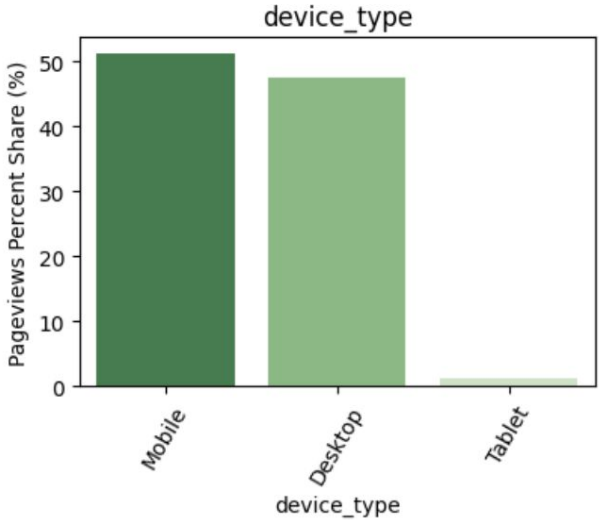


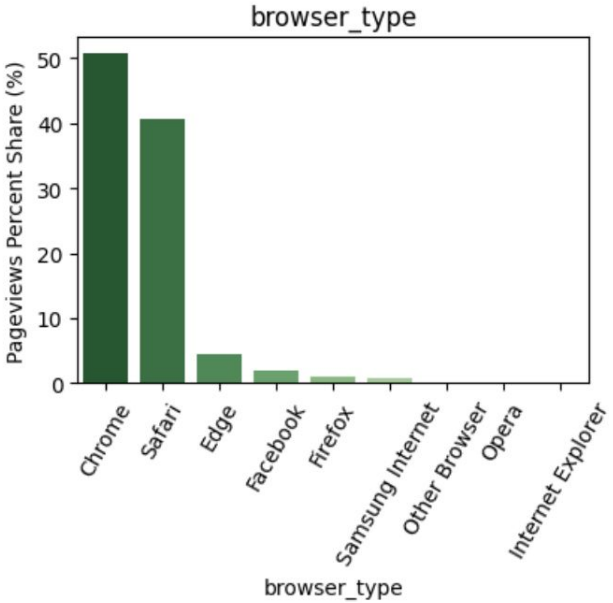
Takeaways:

- No significant seasonal trends by month or day of week, uniform trend
- Peak trend of pageviews (website traffic) between **3PM - 9PM**, with avg. percent share @ **~7.1%** (**+2.96%,** hourly avg.)

Data Analysis (Total Pageviews by Segment)



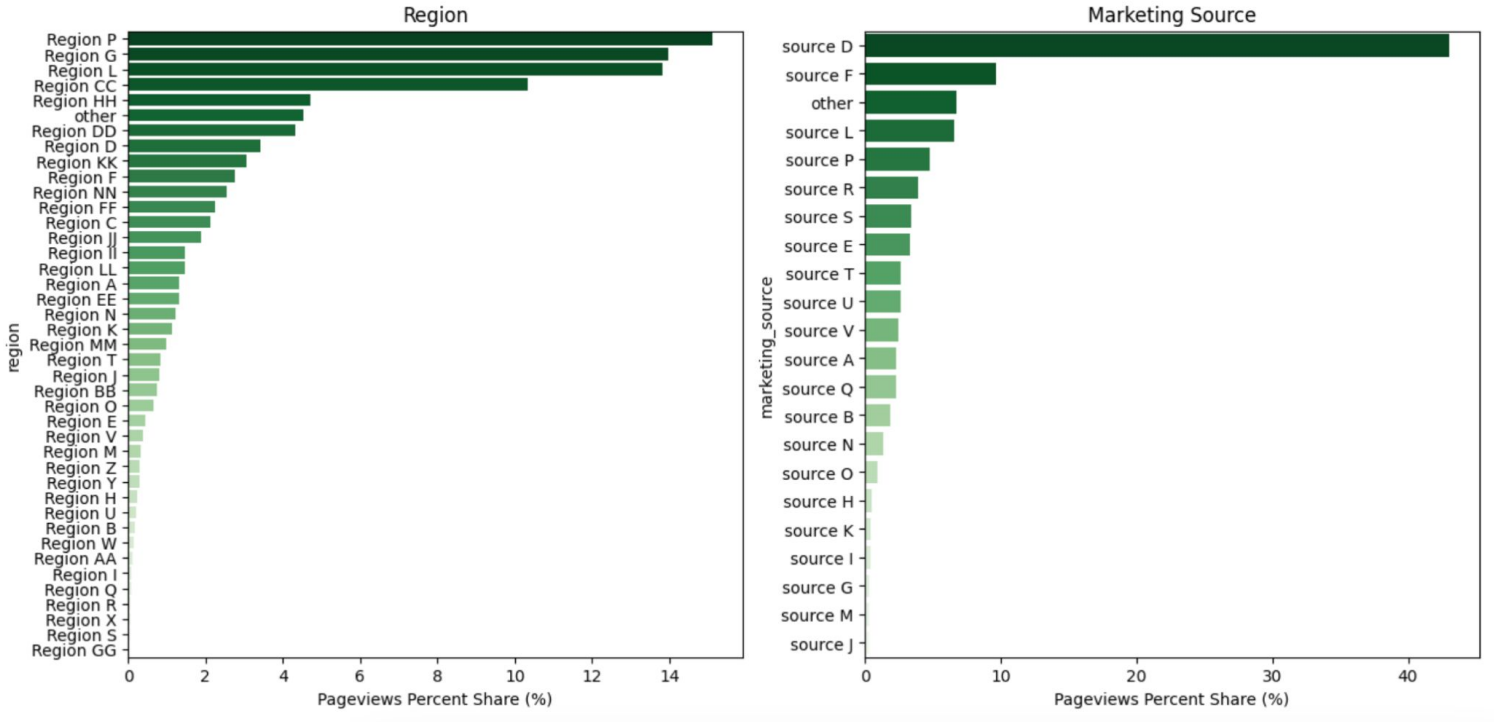




Takeaways:

- **Country (A)** has dominant pageview percent share @ **~97.3%**
- **Mobile, Desktop** has majority pageview percent share @ **~51.1%** and **47.5%**, respectively, tallying total of **~98.6%**
- **Chrome, Safari** leads in pageview percent share @ **~50.7%** and **40.7 %** respectively, tallying total of **~91.4%**

Data Analysis (Total Pageviews by Segment)

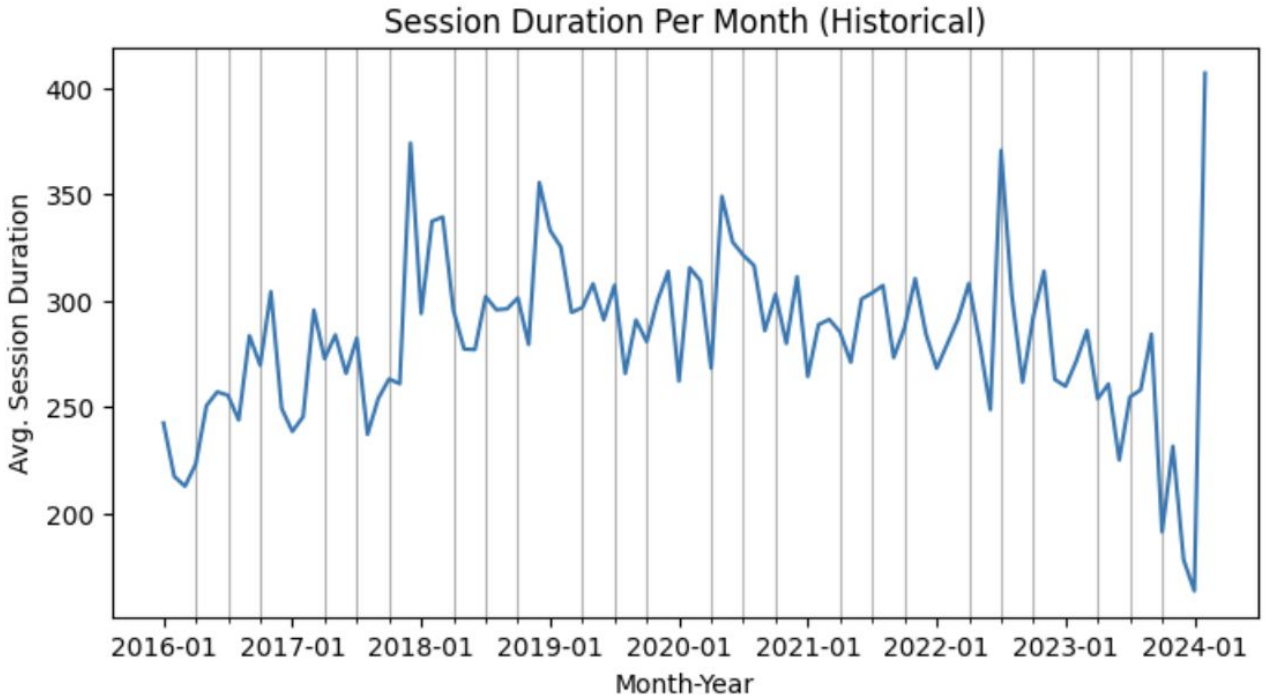


Takeaways:

- **Regions (P, G, L)** have significantly higher pageview percent share @ **~15.1% , 14%,** and **13.8%**, respectively
- **Marketing Source (D)** has highest pageview percent share @ **~43.1%**

Session Duration

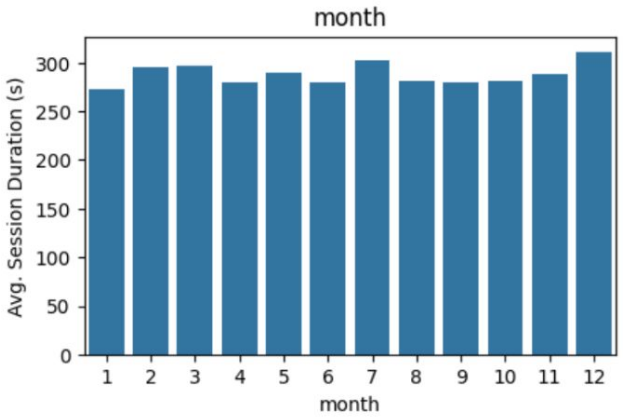
Data Analysis (Session Duration per Month - Historical)

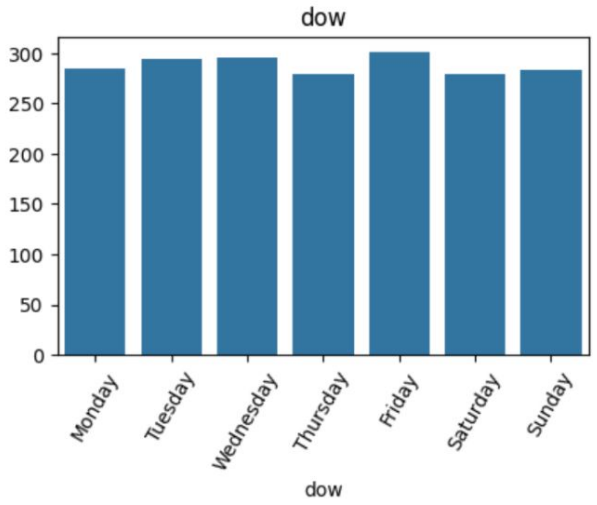


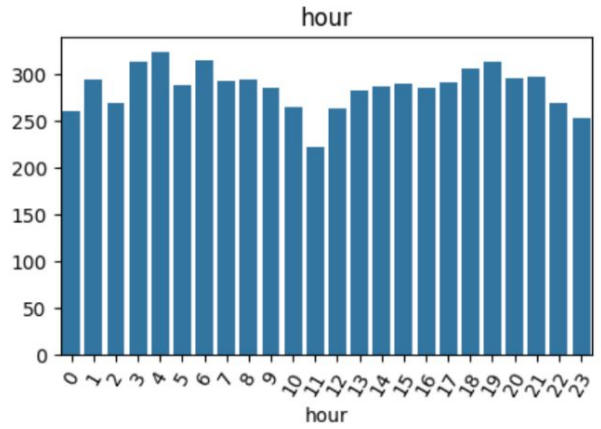
Takeaways:

- Spikes in monthly average session duration during months (**12-2017, 07-2022**) @ **~374.2** and **370.7 secs**, respectively
- Potential anomaly spike in latest month (**02-2024**) @ **~407.1 secs** due to incomplete data (max. timestamp = 02-12-2024)

Data Analysis (Session Duration by Time - Seasonal)



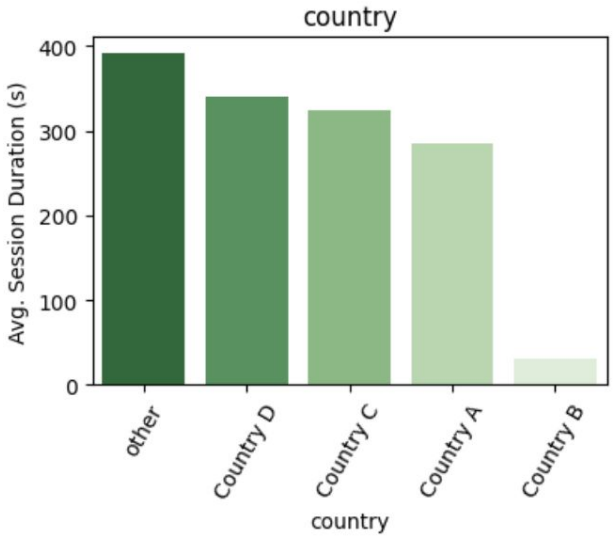


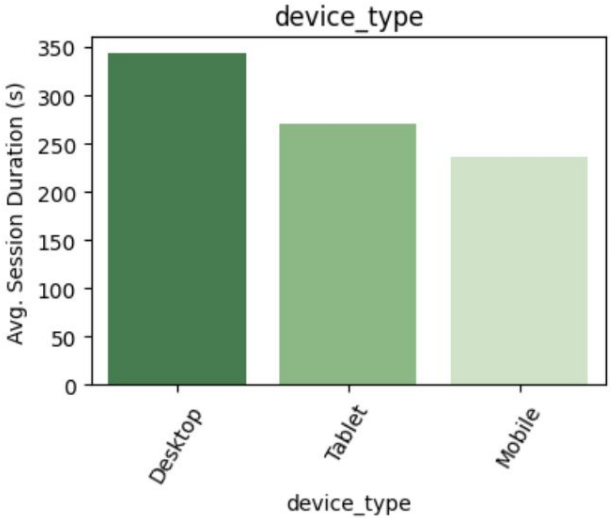


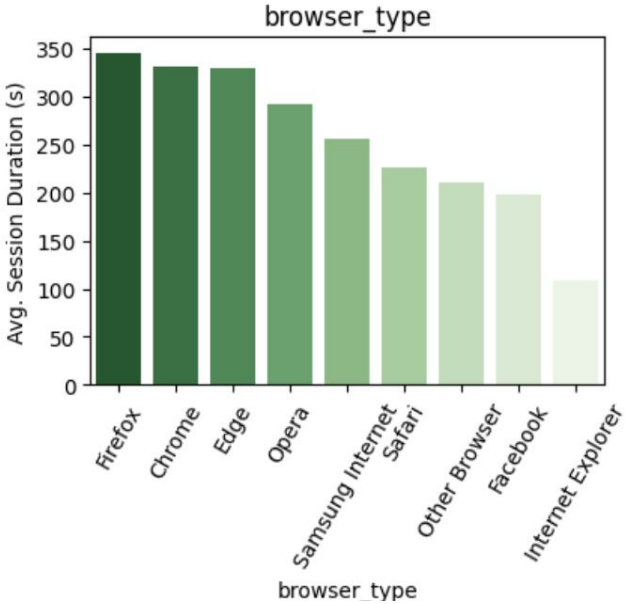
Key Takeaways:

- No significant seasonal trends by month or day of week, uniform trend
- Slight dip in monthly session duration around **10AM - 12PM** (Late Morning), averaging @ **~263.5 secs** (**-22.1 secs**, hourly avg.)

Data Analysis (Session Duration by Segment)



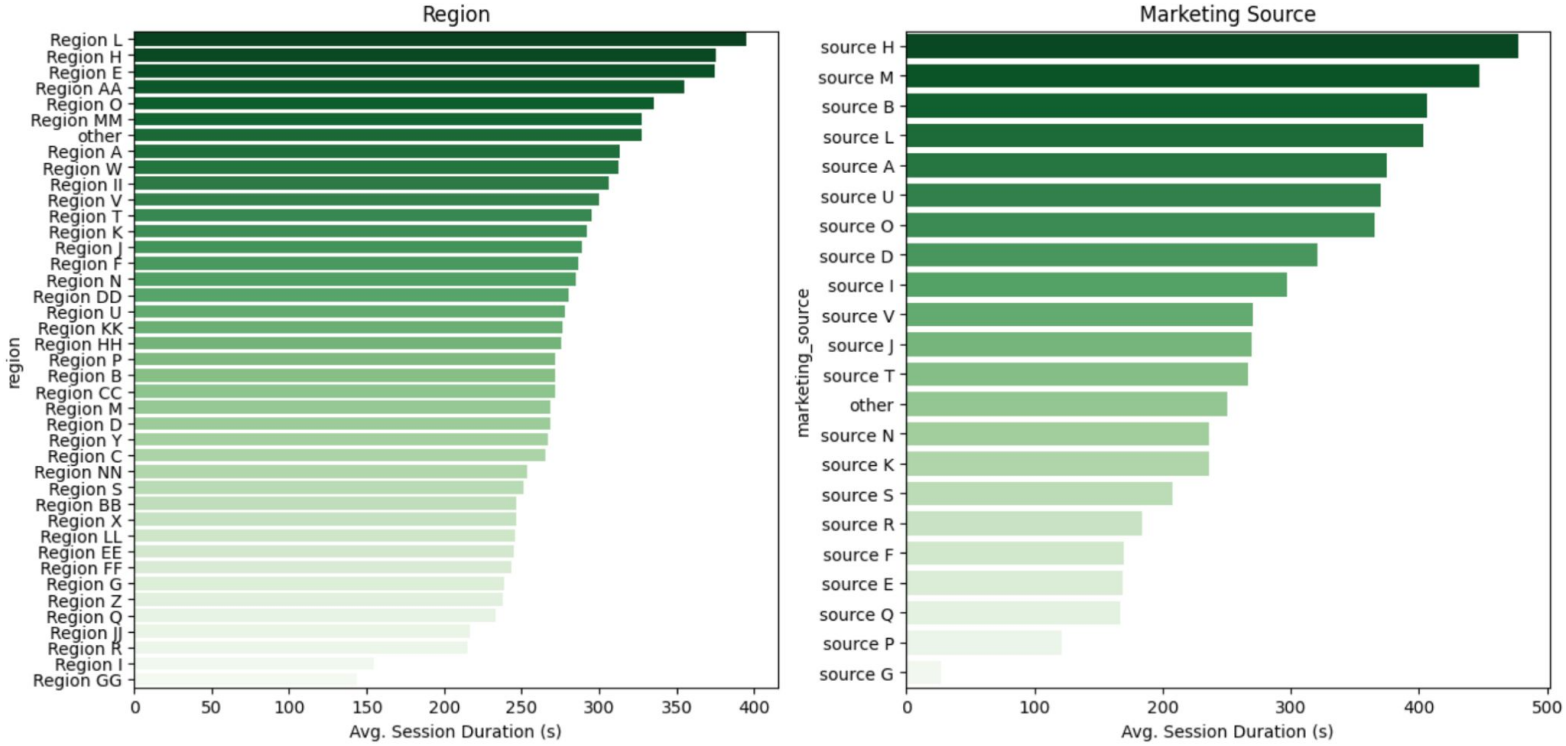




Takeaways:

- **Country (B)** has significantly low avg. session duration @ **~30.6 secs**
- **Desktop** with the highest avg. session duration @ **~343.1 secs** (approx. **+107.6 secs** more than **mobile**)
- **Facebook** (social media) has 2nd lowest avg. session duration @ **~197.7 secs** (4th largest traffic via browser)

Data Analysis (Session Duration by Segment)

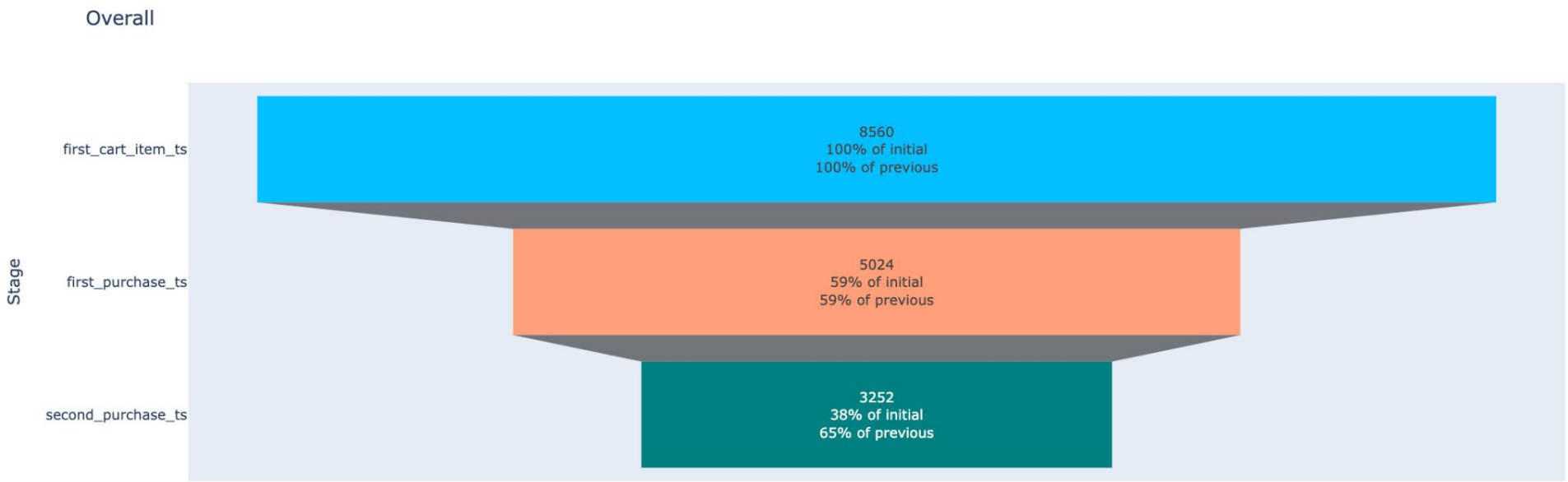


Takeaways:

- **Regions (L, H, E)** leads avg. session duration @ ~ **395.3, 375.4,** and **374.6 secs**, respectively (L repeated in top 5 rankings)
- **Marketing Source (H,M)** led avg. session duration @ **477.9** and **446.8 secs** respectively

Conversion Rates

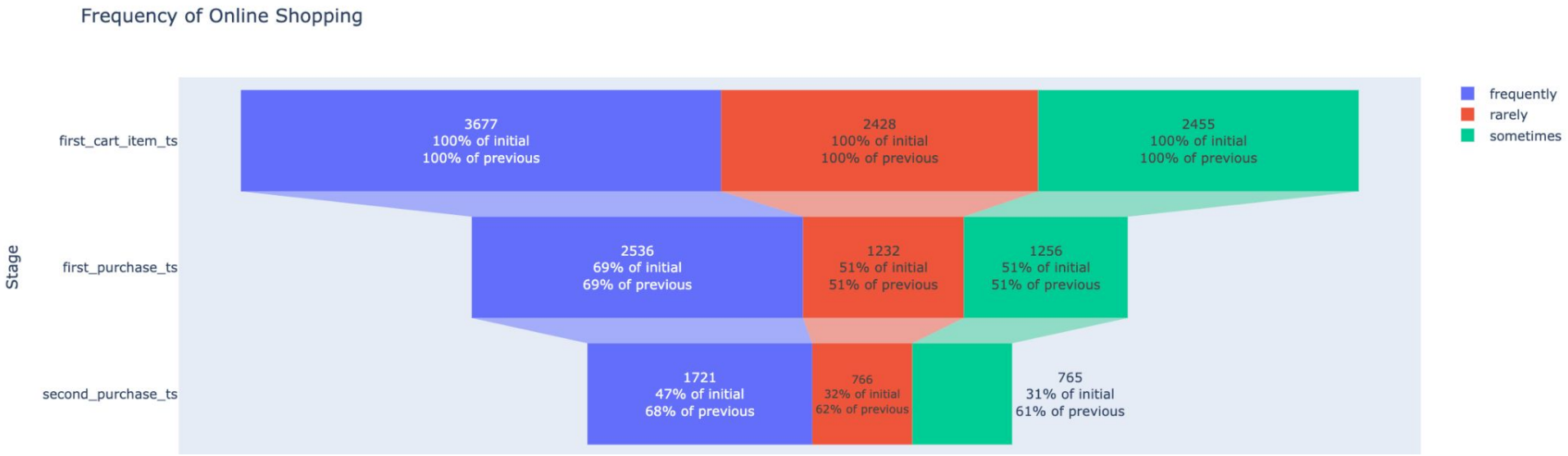
Data Analysis (Sales Funnel -Overall)



Takeaways:

- Over half (**59% conversion rate**) customers who carted for the first time, converted to purchase their first product
- Almost two-thirds (**65% retention rate**) of customers who purchased their first time, return for their second purchase

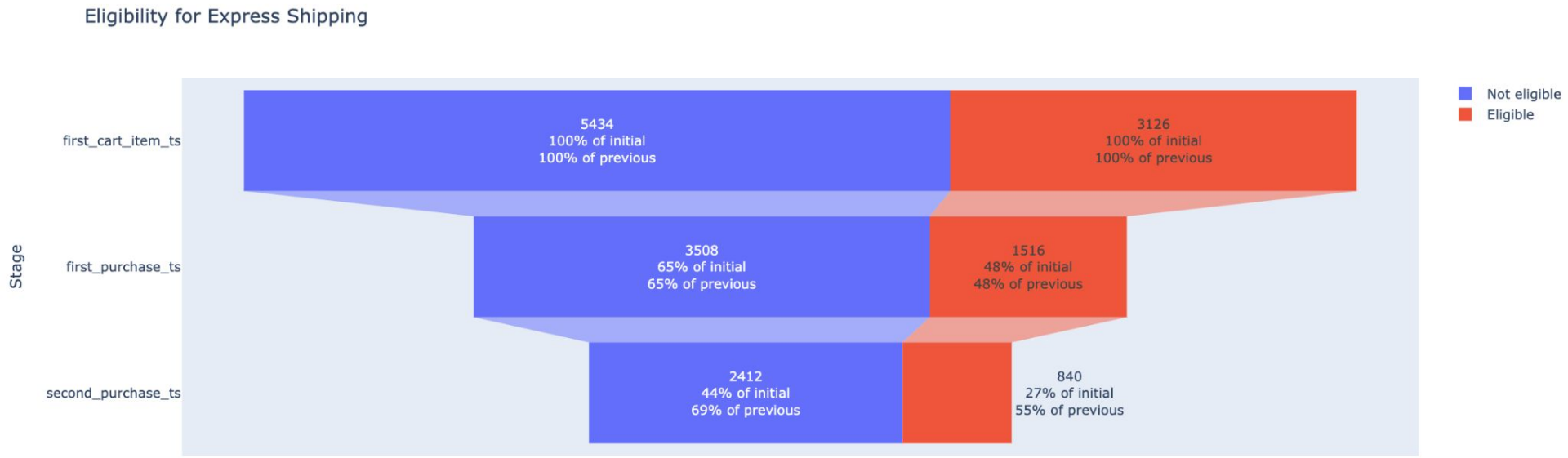
Data Analysis (Sales Funnel -Online Shopping)



Takeaways:

- Customers who reported ‘frequently’ for online shopping have **~18% higher conversion rate** from cart - first time purchase than customers who reported their online shopping as ‘rarely’ and ‘sometimes’

Data Analysis (Sales Funnel - Express Shipping)



Takeaways:

- Customer who are **not eligible** for express shipping have **~17% high conversion rate** from cart to first purchase and ~ 14% higher conversion rate when returning to make a second purchase

Key Takeaways

Marketing Source Insights

- Significantly high amount of **total page views** coming from **Marketing Source D** (opportunity for **conversion**)
- **Marketing Sources (H, M)** lead in **avg. session duration**. More in-depth analysis event patterns (landing path)

Potential Opportunities to Improve "*Effectiveness*"

- Immediately address **decreasing monthly pageviews** as most recent year **(2023)** served as a historic low
- **Region L** investment as it ranked highly across all regions for both pageview share and session duration
- Strategic marketing investment during Late Afternoon, Evenings **(3PM - 9PM)**, supporting peak web traffic
- In-depth analysis on **higher conversion rate** relating to **Express Shipping** eligibility (pricing, promos relation?)

Future Direction

Cross-Functional Data Accessibility

- Pricing/Orders data for revenue-related metrics (AOV, CLV, CAC)
- Potential use of CX data (feedback ratings, surveys) for added context to retention/abandonment rates

Visitor to Customer Relationship (via Data Engineering)

- Better insights on marketing methods (marketing influenced conversions, landing page to conversion, etc.)
- Improved direction/definition on IP address relationship
    - Adding features that support tracking visitor/customer data (accounts, demographic, geographic)
    - Shared and Dynamic IP address can cause inconsistencies relating to multiple users or timeframes

Questions