

Website Analysis Project Insights

This project involves analyzing website performance data through a Power BI dashboard. The dashboard provides insights into customer behavior, traffic sources, visitor types, and overall website engagement metrics.

Key Insights from the Dashboard

1. Top 100 Customers Analysis

- The dashboard lists the top 100 customers based on metrics like Average Page Views (AVG PV), Average Session Duration (AVG SD), and Average Conversion Rate (AVG CR).
- The conversion rate for all listed customers is consistently **10%**.
- Some customers show exceptionally high session duration (e.g., Visitor ID 3033 with **563.42 seconds**), indicating high engagement.

2. Overall Website Performance Metrics

- **Average Bounce Rate (AVG BR): 49.73%** (indicates that almost half of the users leave after visiting only one page).
- **Average Conversion Rate (AVG CR): 5.01%** (suggests a decent engagement level for converting visitors into customers).
- **Average Session Duration (AVG SD): 300.02 seconds** (shows that users spend an average of 5 minutes per session).
- **Average Page Views (AVG PV): 5.01** (users browse around five pages per session).

3. Conversion Rate by Traffic Source

- **Direct traffic** has the highest conversion rate at **5.08%**.
- **Organic search** contributes significantly with **5.03%**.
- **Social Media and Referral** traffic have slightly lower conversion rates (~4.99% and 4.92% respectively).

4. Conversion Rate by Location

- A map visualization highlights the **United States** as a major traffic source, with clustered engagement in **Texas, California, and the Midwest**.
- Locations with larger bubbles indicate higher engagement and conversion rates.

5. Visitor Type Analysis

- **New vs Returning Visitors:**
 - New visitors have a slightly higher conversion rate (**5.05%**) than returning visitors (**4.98%**).
 - The bounce rate for both visitor types is almost equal (~49.64% vs. 49.79%).

What Was Done in This Project?

1. Data Cleaning and Preprocessing:

- Ensured accuracy by handling missing values and inconsistent data.
- Filtered relevant customer data to showcase top performers.

2. Dashboard Design in Power BI:

- Created **interactive visuals** (charts, tables, and maps) for easy interpretation.
- Used **slicers and filters** for dynamic analysis.
- Applied a **consistent color scheme and layout** to enhance readability.

3. Insight Generation:

- Identified key website performance metrics.
- Segmented customer behavior based on location, traffic source, and visitor type.
- Highlighted opportunities to improve conversion rates and reduce bounce rates.

Suggestions for Improvement

- **Improve Social Media Engagement:** Since the conversion rate from social media is slightly lower, optimizing social campaigns may improve performance.
- **Reduce Bounce Rate:** A high bounce rate suggests users leave quickly; improving content and navigation might help retain them longer.
- **Enhance Returning Visitor Retention:** Since new visitors have a slightly better conversion rate, improving loyalty programs might encourage return visits.

Conclusion

This dashboard provides an in-depth analysis of website traffic, customer engagement, and conversion performance. The insights help in making data-driven decisions to optimize website performance and improve user experience.

