

# Website Analytics Dashboard Redesign

From “The Big Book of Dashboards” — Reimagined for Deeper Insight & Interactivity

## Project Overview

This project is a redesign of the **Website Analytics Dashboard** from *The Big Book of Dashboards*. While the original dashboard provided a solid high-level overview of website performance, it lacked analytical depth, interactivity, and visual clarity.

My goal was to transform it into a **more insightful, interactive, and visually cohesive dashboard** that enables users to explore traffic patterns, geographic trends, and engagement metrics at multiple levels of detail.

This redesign focuses on improving:

- Analytical depth beyond surface-level metrics
  - User-driven exploration through interactivity
  - Visual hierarchy and storytelling
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## Original Dashboard: What Worked & What Didn't

### What Worked Well

The original dashboard established important context and baseline metrics:

- **Date range context** helped frame the analysis
- **Key KPIs** (Total Page Views, Total Users) gave a quick sense of scale
- **Most Visited Topics** bar chart was simple and effective
- **Geographic distribution** attempted to show global reach

These strengths formed the foundation of my redesign.

## Limitations Identified

Despite its strengths, the original dashboard had several shortcomings:

- Mostly a **bird's-eye view** with limited analytical depth
  - **Poor visual hierarchy** due to layout, colors, and gridlines
  - **Cluttered geographic visualization** using empty circles
  - **Limited interactivity**, making exploration difficult
  - Some visuals (e.g., weekday page views) felt **forced and low-value**
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## Redesign Objectives

The redesign aimed to:

1. Enable **deeper analysis** of users, page views, and engagement
  2. Improve **visual clarity and narrative flow**
  3. Introduce **interactivity** without overwhelming the user
  4. Replace low-value charts with **more meaningful insights**
  5. Create a dashboard suitable for **real-world stakeholder use**
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## Key Design & Structural Changes

### Dashboard Structure

- Redesigned layout using **container-based organization** for better readability

- Clear separation between **KPIs, geographic insights, and trend analysis**
  - Added a **Show/Hide filter panel** to reduce clutter while preserving flexibility
  - Limited the number of visible charts using **sheet swaps**, allowing depth without overcrowding
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## Analytical Enhancements & New Visualizations

### 1. Density Map – Page Views by Country

- Replaced the cluttered symbol map from the original dashboard
- Highlights regions with **high traffic concentration**
- Provides an intuitive, high-level geographic overview

### 2. Pareto Chart – Users by Country

- Dual-axis Pareto chart showing:
  - User count by country
  - Cumulative contribution to total users
- Helps identify **top contributing countries** and the long tail

### 3. User Trend Line – Top 5 Countries

- Line chart tracking user growth over time for the top 5 countries
- Includes a **trend line** to highlight gradual growth
- Enables comparison of regional growth patterns

### 4. Page Views Comparison – Top 5 Countries

- Bar chart showing page view volume
- Allows **direct comparison** of traffic contribution between countries

## 5. Symbol Map – Average Session Duration

- Uses **size encoding** to represent engagement levels
  - Adds an engagement perspective beyond traffic volume
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## Interactivity Features

- **Map-as-filter:** Selecting a country filters all other charts
- **Synchronized country filter** across visuals
- **Sheet swapping using parameters** to toggle between chart views
- **Date range slider** retained from the original dashboard for temporal context

These features allow users to move seamlessly from overview to detail.

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## Design Improvements

- Adopted a **neutral, cooler color palette** for a professional look
- Reduced gridlines and visual noise
- Used consistent color encoding across charts
- Added **trend lines** where appropriate to highlight patterns
- Balanced insight density with visual simplicity

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## Explored but Excluded Visuals

To maintain focus and clarity, some visuals were intentionally excluded:

- **Scatter plot:** Page Views vs. Avg. Session Duration (kept as reference)
  - **Sankey diagram:** Country → City user flow (insufficient data density)
  - **Forecasting:** Removed due to short time series and unreliable predictions
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## Key Insights Delivered

- A small number of countries contribute the majority of users and page views
  - User engagement (session duration) varies significantly by region
  - Top countries show **steady growth over time**, indicating consistent audience expansion
  - Geographic filtering reveals **region-specific performance patterns**
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## Future Improvements

For a larger-scale project, this could be expanded into:

1. **Global Overview Dashboard**
  - High-level KPIs, geographic distribution, and growth trends
2. **Regional Deep-Dive Dashboard**
  - Country/city-level engagement, content performance, and user behavior

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## Tools & Skills Demonstrated

- **Tableau:** Parameters, calculated fields, sheet swapping, map-based filtering
- **Dashboard Design:** Visual hierarchy, storytelling, UX
- **Analytics Thinking:** Metric selection, chart justification, insight generation
- **Data Visualization Best Practices**