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Data 110

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Final Report

Social Media Engagement

The research questions include the distribution of likes over platforms, variability in engagement levels, regional engagement differences, and the relationship among likes, shares, and comments. The exploratory data analysis reveals an even distribution of viral posts across the platforms, with YouTube showing a slight dominance. Notably, a trend shows that low and high engagement posts are more common than medium engagement posts, suggesting polarization in audience resonance. Visualizations reveal significant engagement differences across platforms. Box plots indicate that YouTube consistently holds a higher median number of likes, signaling stronger user engagement compared to TikTok, Instagram, and Twitter. Despite fairly balanced engagement levels among platforms, YouTube and Instagram lead in high-engagement content. The USA is identified as the region with the most viral posts, followed by Canada and the UK. Interactive plots display engagement metrics across platforms and regions, with a bubble chart revealing a correlation between likes and shares. However, this relationship varies across platforms, indicating complexity in user interactions. A stacked bar chart shows regional disparities, with the USA leading in overall engagement, particularly in high engagement metrics, while countries like Germany and Japan exhibit lower high engagement proportions. This demonstrates the impact of geography on social media engagement.

In conclusion, the analysis highlights variations in social media engagement across platforms and regions, effectively answering the research questions. Likely distributions of likes indicate that no single platform distinctly outperforms the others. While overall engagement appears balanced, YouTube stands out for consistently high engagement levels. The USA leads in viral posts, with Canada and the UK following. The correlation between likes and shares emphasizes the multi-dimensional factors influencing online engagement. Regional disparities, highlighted in the bar chart, reveal that cultural and infrastructural factors significantly shape audience engagement, confirming the pivotal role of geographic context.