Social Media Analytics for Strategic Branding – Spotify

Project Overview

Over the past year, Spotify has launched multiple music-driven campaigns and artist collaborations to grow its listener base, promote new features like podcasts and Wrapped, and strengthen its digital brand identity.

However, the marketing team is facing challenges in unifying and measuring the impact of diverse campaign strategies across platforms. They seek clarity on:

- Which content types and artists drive the most engagement?
- Where to allocate advertising budget effectively?
- What influences follower growth and app downloads?
- How do social campaigns correlate with premium subscriptions?

This project addresses these critical questions by building a comprehensive Social Media Intelligence Solution that consolidates Spotify's social data and delivers actionable insights.

Project Objective

Built a comprehensive **Social Media Intelligence Solution in Excel** that consolidates Spotify's social data and delivers actionable insights to:

- Enhance content strategy based on engagement performance
- Optimize platform investments and ad spend allocation
- Evaluate campaign success and ROI across all marketing initiatives
- Guide strategic decisions for follower growth and premium subscription conversion

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Dataset Description: Spotify Marketing Dataset

Posts Dataset

Includes details of social media posts across platforms covering:

Columns: Platform, Post_Type, Artist_Tag, Likes, Comments, Shares, Impressions, Hashtags, Post_Date, Reach

Used to analyze post-level engagement and content performance.

Engagement Summary Dataset

Weekly aggregated metrics per platform covering:

Columns: Platform, Week, Ad_Spend, Follower_Growth, Clicks, Impressions, Downloads, Engagement_Rate

Used to track platform performance trends and correlations over time.

Campaign Metadata Dataset

Details of Spotify's major campaigns including:

Columns: Campaign_Name, Start_Date, End_Date, Platform, Objective, Campaign_ID, Budget, Associated_Artists

Examples: ChillVibes, Wrapped 2024, etc.

Used to evaluate campaign effectiveness and ROI.

Tasks Performed

Task 1: Data Preprocessing and Cleaning

- Eliminated duplicate post entries to ensure data integrity
- Standardized date formats (YYYY-MM-DD) across all datasets
- Standardized platform names (Instagram, TikTok, Twitter, YouTube, etc.)
- Ensured numeric columns (likes, impressions, ad spend, downloads) are correctly formatted
- Separated multi-hashtag columns into separate entries for granular hashtag analysis

Outcome: Clean, standardized dataset ready for comprehensive analysis.

Task 2: Engagement Analysis

Used the "Posts" sheet to:

- Calculated Engagement Rate per platform:
  - **Engagement Rate = (Likes + Comments + Shares) / Impressions**
- Identified Top 10 posts by engagement rate with detailed metrics
- Created Pivot Table showing:
  - Total Likes, Shares, Comments by Content Type (Text, Story, Reel, Video) and Platform
  - Average Clicks per post by Hashtag
  - Engagement distribution across post types
- Highlighted Top-performing hashtags using ranking formulas
- Identified hashtags with 500%+ higher engagement rates than average

Key Finding: Reels and Videos outperform Text and Stories by 2.5–3x on average across platforms.

Task 3: Platform Performance Analysis

- Determined which platform yields highest engagement:
    - **TikTok**: Highest engagement rate (~8.5%)
    - **Instagram**: Strong engagement (~6.2%), highest reach
    - **YouTube**: High impressions, moderate engagement (~4.8%)
    - **Twitter**: Lower engagement (~2.1%)
- Compared weekly follower growth rates across platforms
- Visualized Ad Spend vs. Engagement using scatter and bar charts
- Analyzed cost-per-engagement by platform

Recommendation: Focus resources on TikTok and Instagram; optimize YouTube for brand awareness; re-evaluate Twitter strategy.

Task 4: Hashtag & Content Strategy

Identified:

- Most frequent hashtags and average engagement for each
    - **Top hashtags**: #SpotifyWrapped, #NewMusic, #ChillVibes, #PodcastLove
    - **Engagement ranges**: Top hashtags averaging 6–10% engagement vs. 1.5–2% for low performers
- Compared content types (Text, Story, Reel) performance across platforms:
    - **Reels on Instagram/TikTok**: 8–12% engagement
    - **Stories on Instagram**: 3–5% engagement
    - **Text posts**: 0.5–2% engagement
- Recommended optimal content type-platform combinations:
    - **TikTok**: Prioritize Reels and Music Clips
    - **Instagram**: Balance Reels (60%), Stories (30%), Carousel Posts (10%)
    - **YouTube**: Short-form videos and music videos
    - **Twitter**: News updates, artist announcements, engagement-driven content

Finding: Multi-format content (mixing Reels, Stories, Text) on Instagram drives 25% higher overall engagement than single-format strategy.

Task 5: Campaign Effectiveness

Computed:

- Total & average impressions, likes, clicks per campaign
- Engagement uplift during vs. before campaign
- Campaign ROI calculations:
    - **Wrapped 2024**: Highest ROI at 12.5 engagement per $1 ad spend
    - **ChillVibes**: Strong ROI at 8.3 engagement per $1 ad spend
    - **New Music Friday**: Moderate ROI at 5.1 engagement per $1 ad spend

- Campaign with highest ROI (engagement/ad spend): **Wrapped 2024** with 350% increase in engagement during campaign window
- Campaign with strongest follower or app download growth: **Wrapped 2024** drove 45% spike in app downloads and 22% follower growth

Critical Insight: Wrapped 2024 campaign delivered 15% higher engagement uplift and 3x better follower growth than other campaigns despite similar budget allocation.

Task 6: Follower Retention & Loyalty

- Identified week with highest net follower gain:
    - **Week 42 (Oct 2024)**: +185K followers across all platforms (coinciding with Wrapped 2024 launch)
- Created moving average chart to analyze follower trends:
    - Baseline weekly growth: ~25K followers
    - Peak weeks (campaign periods): 120K–185K followers
    - Post-campaign retention: 60–70% of gained followers retained
- Correlation analysis between Ad Spend vs. Follower Growth/App Downloads:
    - **Strong positive correlation** (r = 0.78) between ad spend and follower growth
    - **Moderate positive correlation** (r = 0.62) between ad spend and app downloads
    - **Critical finding**: Ad spend ROI highest when aligned with high-engagement campaigns (Wrapped, New Music releases)

Finding: Campaign-driven follower growth is more sustainable when paired with organic engagement (high-engagement content), resulting in 40% higher 30-day retention vs. ad-spend-only growth.

Key Insights & Findings

Content Performance:

- Reels and short-form videos drive 2.5–3x higher engagement than static posts
- Artist collaborations in posts increase engagement by 35–45%
- Posts with 3–5 hashtags perform optimally; beyond 5 shows diminishing returns

Platform Insights:

- TikTok delivers highest engagement rate (8.5%) with fastest growth trajectory
- Instagram maintains strong balance of engagement and reach for brand-building
- YouTube excels in brand awareness and video discovery
- Twitter underperforms relative to ad spend; consider strategic refocus

Campaign Impact:

- Wrapped 2024 campaign: +350% engagement uplift, +45% app downloads, +22% follower growth
- Campaign-aligned content drives 5–6x higher engagement vs. non-campaign posts

- Best performing campaigns combine limited-time urgency with shareable content

Ad Spend Efficiency:

- TikTok and Instagram deliver lowest cost-per-engagement (~$0.02–0.03)
- YouTube requires 2–3x higher ad spend for equivalent engagement
- Campaign periods justify 30–40% budget increase due to multiplier effect on engagement

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Expected Outcomes

1. **Unified Social Media Dashboard**: Consolidated view of performance across all platforms and campaigns
2. **Content Strategy Recommendations**: Data-backed optimal content types, hashtag strategies, and posting cadence
3. **Platform Investment Prioritization**: Clear allocation of budget and resources based on ROI and engagement metrics
4. **Campaign Performance Benchmarks**: Baseline metrics for success and failure criteria for future campaigns
5. **Predictive Insights**: Ability to forecast engagement and follower growth based on historical patterns
6. **Actionable Dashboards**: Executive-ready visualizations for stakeholder reporting and decision-making