Portfolio Project: Social Media Engagement Dashboard

Overview:

Developed an interactive Power BI dashboard to analyze trends in social media engagement using a simulated dataset. The goal was to uncover insights by industry and brand to support data-driven decision-making for marketing and communications teams.

Key Objectives:

- Identify engagement patterns across industries and brands

- Visualize sentiment and performance trends over time

- Create a user-friendly tool for management to filter and explore insights

Tools Used:

Python (Pandas), Power BI, GitHub

Process Summary:

Data Acquisition:

Sourced from Kaggle: Social Media Engagement Dataset, which simulates metrics like likes, shares, comments, impressions, sentiment, toxicity, and engagement growth.

Data Transformation:

- Cleaned and standardized shorthand fields into plain language

- Parsed composite fields (e.g., timestamp, location) into meaningful components

- Tokenized multi-entry columns (hashtags, mentions, keywords) and calculated frequency

- Created a new industry classification field for deeper segmentation

- Scripted transformations using Python for repeatability

GitHub Script:

https://github.com/Holley-Michelle/SlytherScript/blob/main/Social%20Media%20Engagement%20Script(Update).ipynb

Dashboard Features:

- Avg. Engagement by Industry and Brand: Highlights performance trends across key sectors

- Total Impressions by Industry & Campaign: Includes drill-down capabilities to brand, campaign, and phase level

- Sentiment Score Over Time by Industry: Displays yearly sentiment change, average scores, and industry ranking

- Dynamic filters to isolate insights by brand and/or industry for a tailored user experience

Industries Tracked:

Technology, Soft Drinks, Automotive, Shoe/Sport Brands

Brands Analyzed:

Google, Microsoft, Apple, Samsung, Amazon, Coca-Cola, Pepsi, Nike, Adidas, Toyota

Still in Development:

This is a first pass of the dashboard; next steps include visual refinements, calculated engagement benchmarks, and user-testing for stakeholder feedback.