# Spotify Music Analysis Project : Prakash Poudyal

## Project Overview

This project explores the Most Streamed Spotify Songs of 2023 using Tableau to create interactive dashboards that help Sony Music’s Chief Marketing Officer understand trends, improve release schedules, and make data-driven marketing decisions.

The focus of the analysis is on three key areas:

* Tracking streaming behavior over time
* Evaluating artist performance and engagement
* Providing recommendations that increase revenue and reach

This project highlights skills in data governance, ethical visualization practices, and predictive analytics.

## 1. Data Governance Framework

Data governance ensures that data is accurate, secure, and useful throughout its lifecycle. The following four areas guided this project:

### 1. Data Quality Management

* Goal: Keep data clean, consistent, and accurate.
* Tableau Feature: Used the Data Interpreter to prepare and clean the data for analysis.

### 2. Data Operations Management

* Goal: Streamline how data is processed and maintained.
* Tableau Feature: Worked with both live connections and extracts to refresh data efficiently and improve workflows.

### 3. Data Security Management

* Goal: Protect sensitive data and limit access.
* Tableau Feature: Set up row-level security to control who can see certain data.

### 4. Data Lifecycle Management

* Goal: Manage data from its creation through to its archival or deletion.
* Tableau Feature: Leveraged version control and archiving through Tableau Server to track changes and keep data organized.

## 2. Ethical Considerations in Data Visualization

Ethics play an important role in data visualization to ensure that information is honest and respectful.

### 1. Accuracy

* Visualizations were created carefully to reflect the real data without misleading viewers.
* Example: Chart scales and axes were chosen to give a clear and true picture.

### 2. Transparency

* Clearly explained the data sources and the steps taken during analysis.
* Example: Added labels and legends so viewers understand where the data came from and how it was used.

### 3. Confidentiality

* Protected sensitive data by keeping private details anonymous.
* Example: Used access controls to make sure only the right people could see certain information.

## 3. Visualization Dashboards and Insights

These dashboards provide insights that support decision-making and strategy for Sony Music.

### Dashboard 1: Trends Over Time

* Line Chart of Streams: Showed growth patterns and seasonal peaks in streaming. Insight: Helped predict high-demand periods for releases and marketing pushes.
* Heatmap of Release Dates: Identified the most successful times to launch new tracks. Insight: Guided release calendars for maximum impact.

### Dashboard 2: Artist Performance

* Bar Chart of Top Artists: Highlighted artists who generate the most streams to guide investment decisions.
* Bubble Chart of Streams vs Playlist Features: Showed which artists have both high streams and strong playlist presence. Insight: Informed marketing strategies and playlist promotion plans.

### Dashboard 3: Market and Audience Insights

* Tree Chart of Playlists vs Streams: Showed how playlist inclusion drives more streams. Insight: Helped decide how to allocate marketing budgets for playlist promotion.
* Scatter Plot of Valence vs Danceability: Explored what moods and energy levels audiences prefer. Insight:Guided A&R teams on what qualities to look for in songs and artists.

## Key Outcomes

* Produced actionable insights to improve streaming numbers, marketing decisions, and overall positioning.
* Demonstrated how predictive analytics can be applied in the music industry.
* Built a flexible visualization framework for ongoing use.

## Recommendations

1. Schedule releases during times of historically high streaming activity.
2. Invest resources in artists with strong proven performance.
3. Focus on playlist promotion to drive streaming growth.
4. Create and promote songs that match listener preferences for mood and energy.

## For Resume

**Project Title:** Spotify 2023 Streaming Analytics  
**Tools:** Tableau, Excel, GitHub, Data Governance Practices  
**Summary:**

* Designed three interactive dashboards to analyze Spotify's 2023 streaming data.
* Delivered insights that informed release strategies, artist investments, and marketing plans.
* Applied data governance and ethical visualization principles to ensure accuracy and security.

**GitHub Repository:**