Data Wrangling ASG1

XYZ Music Records Company

Tan Jun Yu Zavier
(S10255651D)

XYZ
Music Records Company

01 - Introduction

02 - Data Exploration

03 - Regression Model

04 - Recommendations

XYZ
Music Records Company

01 - Introduction

01 - Introduction

XYZ
Music Records Company

Problem Understanding

AIM

Investigate the influence of various song characteristic on a song’s popularity

Role

Data Analyst at XYZ Music Record Company

Outcome

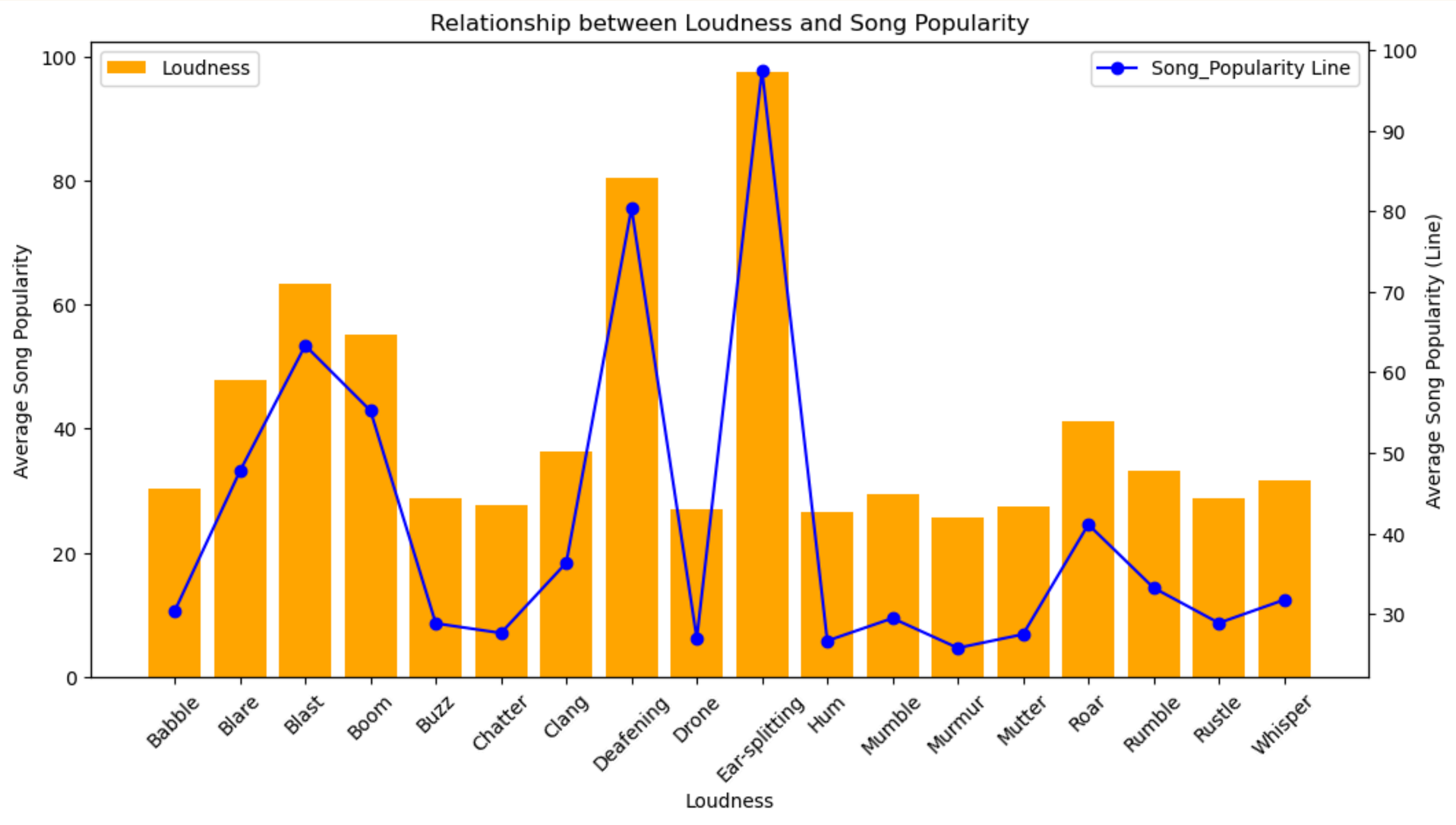
Offer valuable insights to the management team, aiding them to optimize their allocation of market resources

Dataset

‘Song_Popularity.csv’ includes various factors that might influence a song's popularity

02 - Data Exploration

Song Popularity & Loudness Relationship

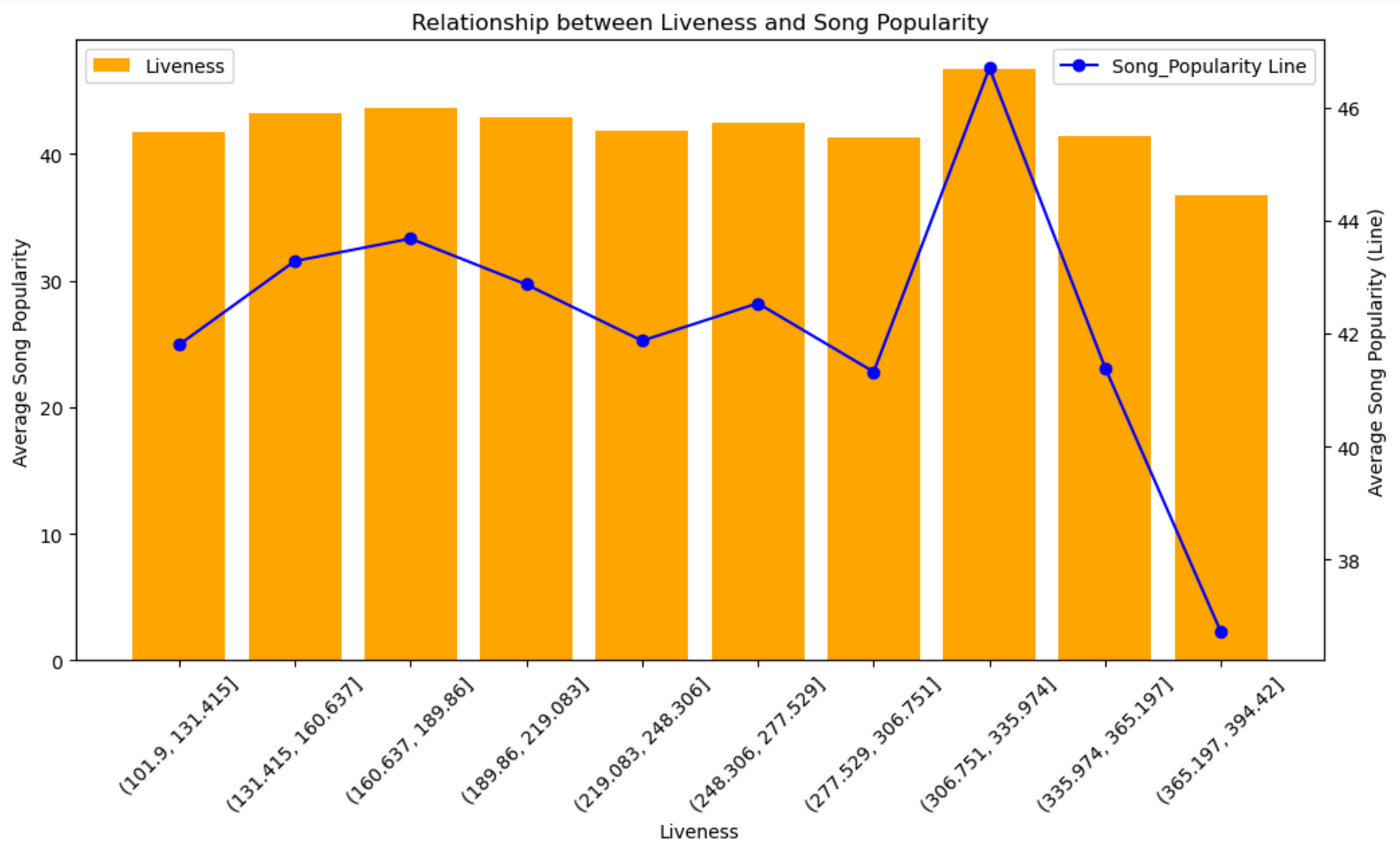


- Complex and non-linear
- Peaks in Popularity
- Preference for Ear-Splitting and Deafening levels

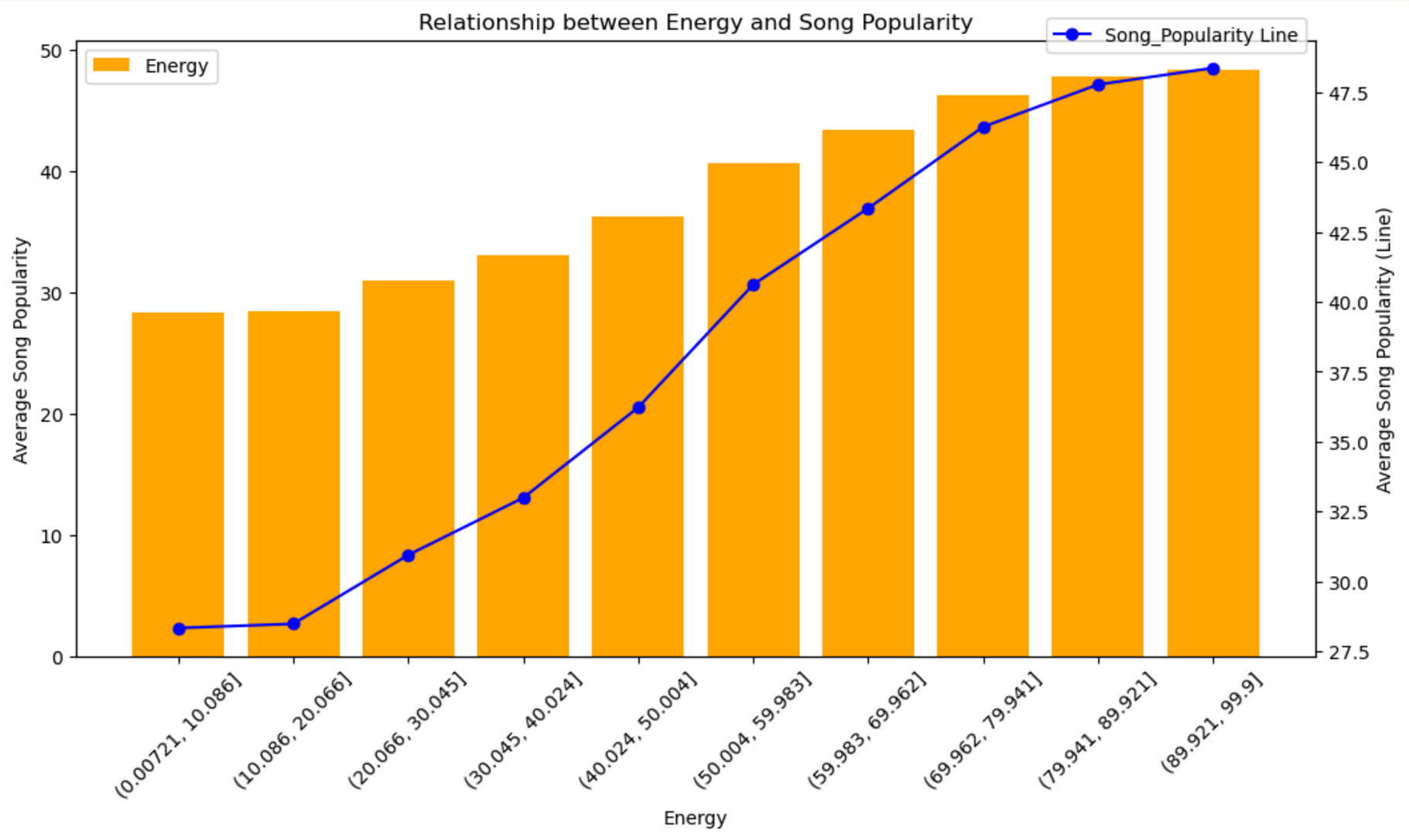
Song Popularity & Liveness Relationship

XYZ
Music Records Company

- Non-linear
- Peak Mid to High Liveness
- Decline at very high liveness



Song Popularity & Energy Relationship

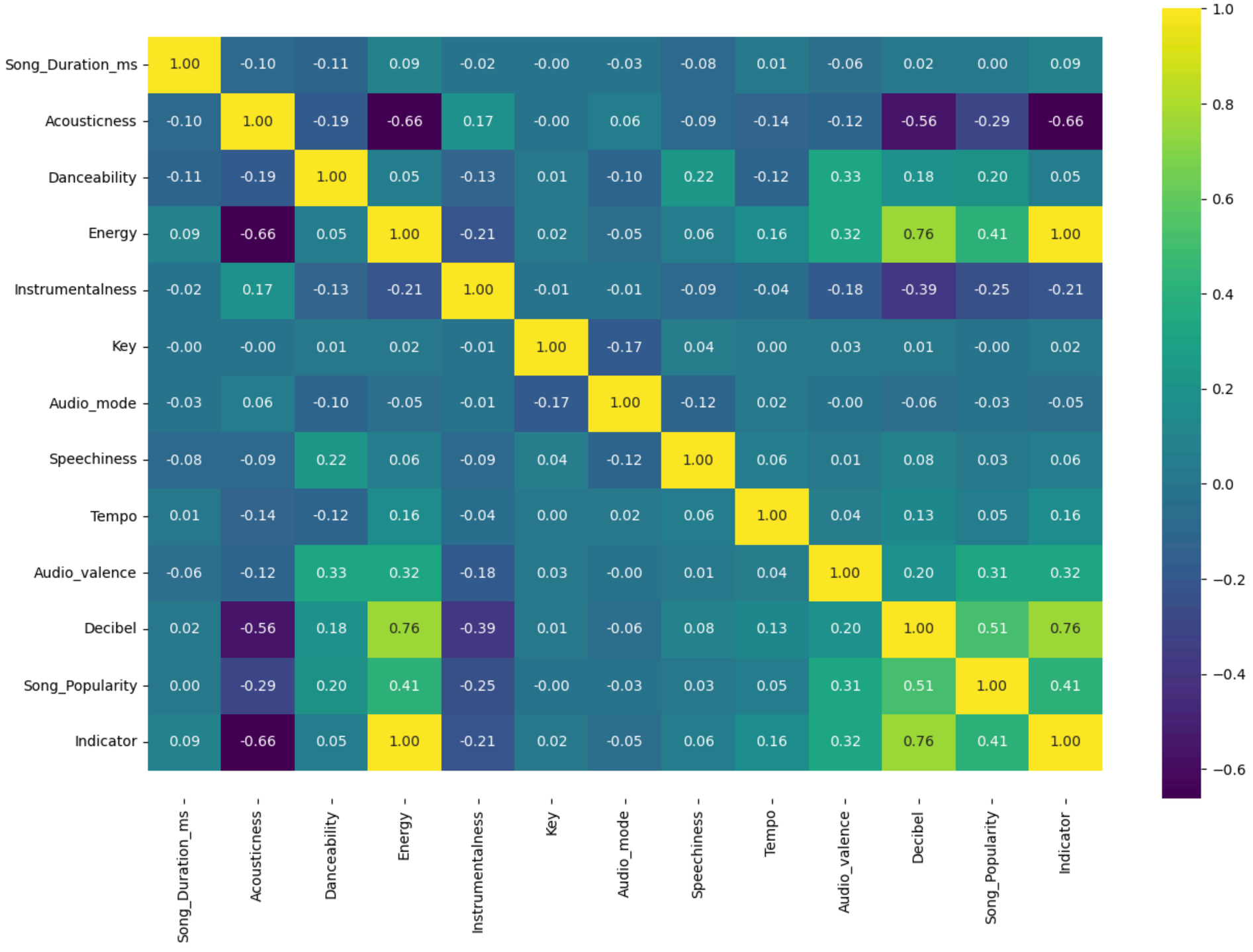


- Strong Positive Relationship
- Steady Increase
- Peak Popularity at peak Energy

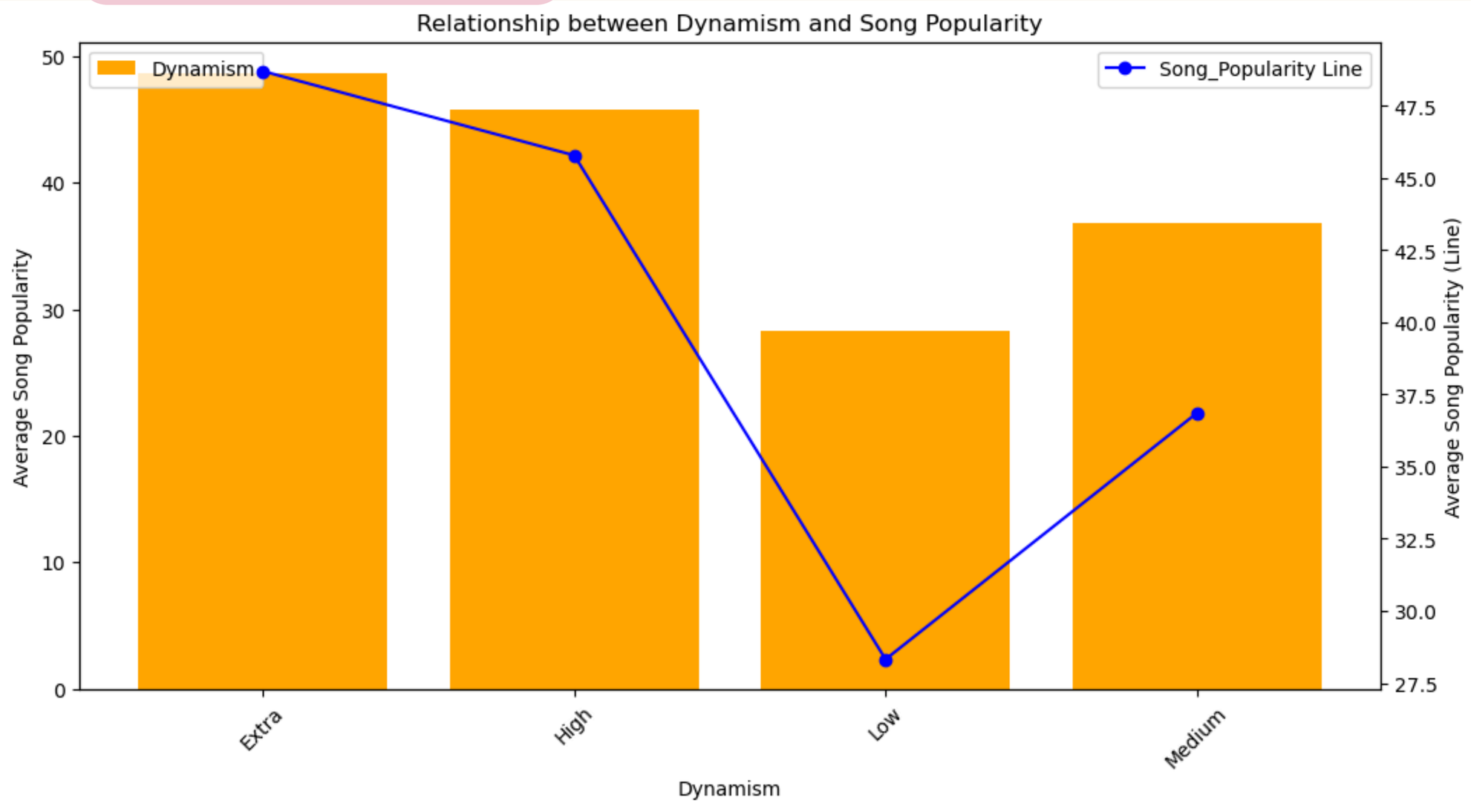
Correlation Matrix

- Energy & Decibel (0.76)
- Song Popularity & Energy (0.41)

- Acousticness & Energy (-0.66)
- Acousticness & Decibel (-0.56)



Dynamism & Song Popularity Relationship

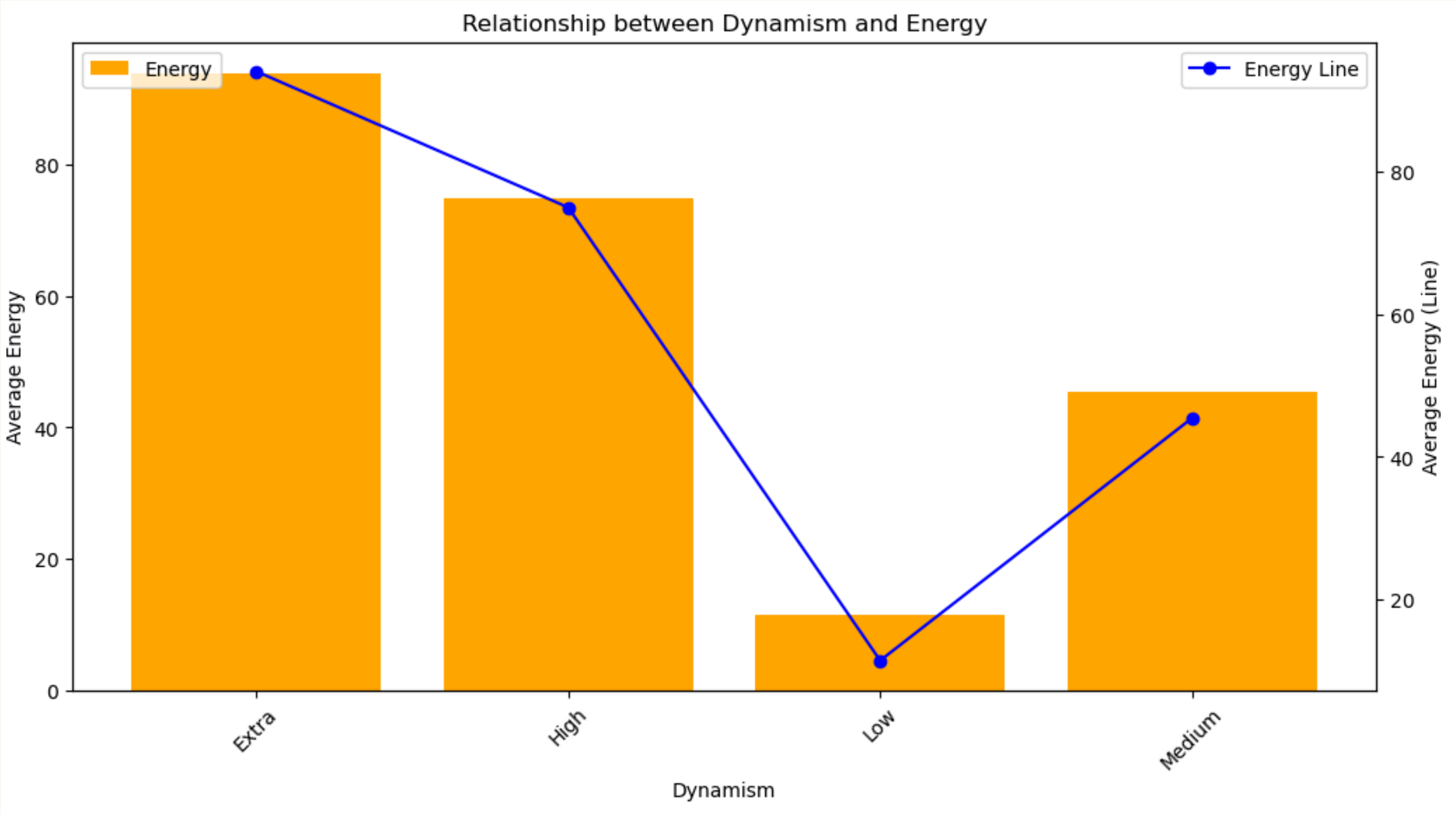


	Dynamism	Energy
0	Extra	94.032232
1	High	74.952486
2	Low	11.420394
3	Medium	45.419185

Dynamism & Energy Relationship

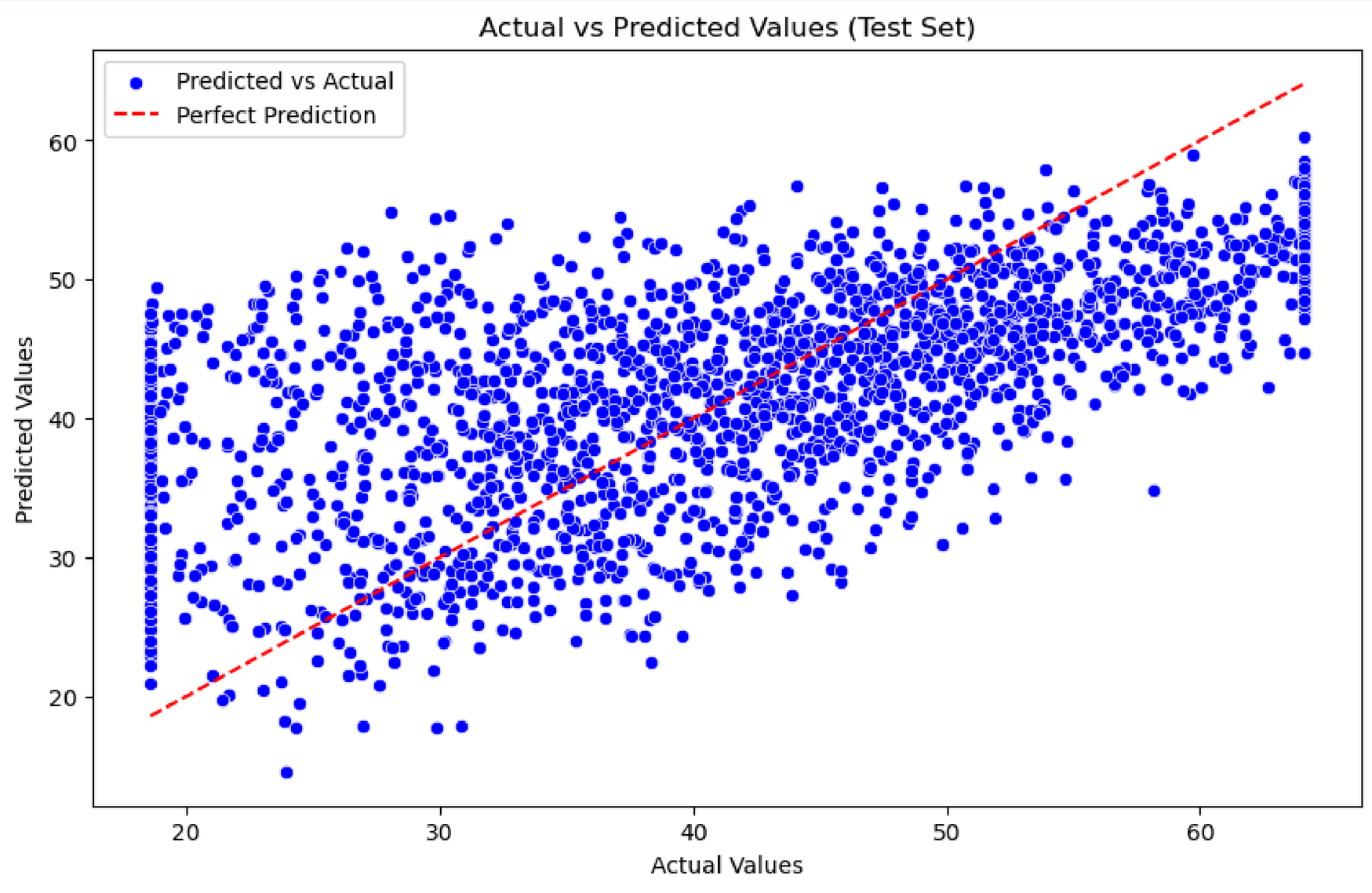
XYZ
Music Records Company

	Dynamism	Song_Popularity
0	Extra	48.697755
1	High	45.783112
2	Low	28.324152
3	Medium	36.854930



03 - Regression Model

Actual vs Predicted




```
train_mse: 101.89413003829577
 test_mse: 103.93180170819184
train_r-sq: 0.38586635168167316
 test_r-sq: 0.3606776465912065
```

Why does this matter?

- Strategic Decision Making
- Resource Allocation

XYZ
Music Records Company

04 - Recommendations

Recommendations

- Focus on Tracks with High Energy & Loudness
- Increase Production of High Danceability Tracks
- Reduce Tracks with Low Dynamism

XYZ
Music Records Company

Thank You