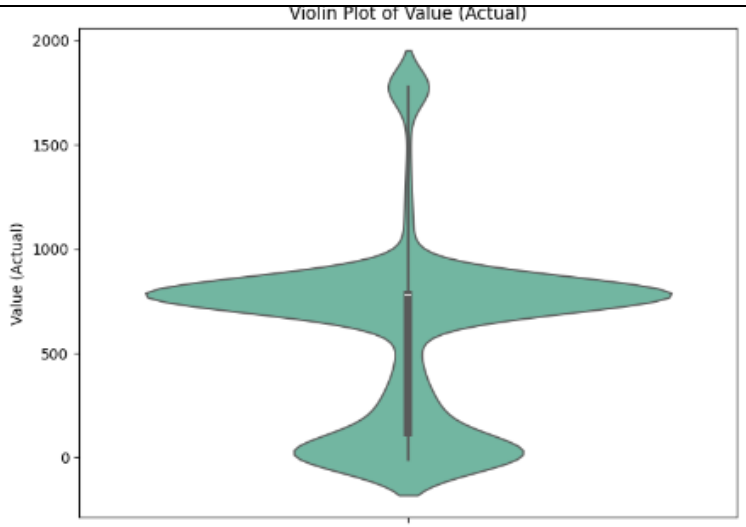
Data Collection and Preprocessing Phase

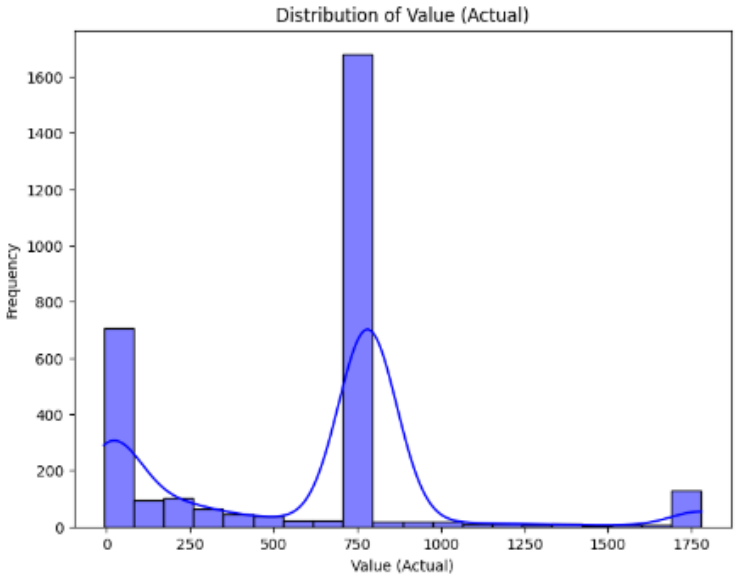
Date	8 July 2024
Team ID	739724
Project Title	Rhythmic Revenue: Unveiling The Future Of Music Sales With Machine Learning
Maximum Marks	6 Marks

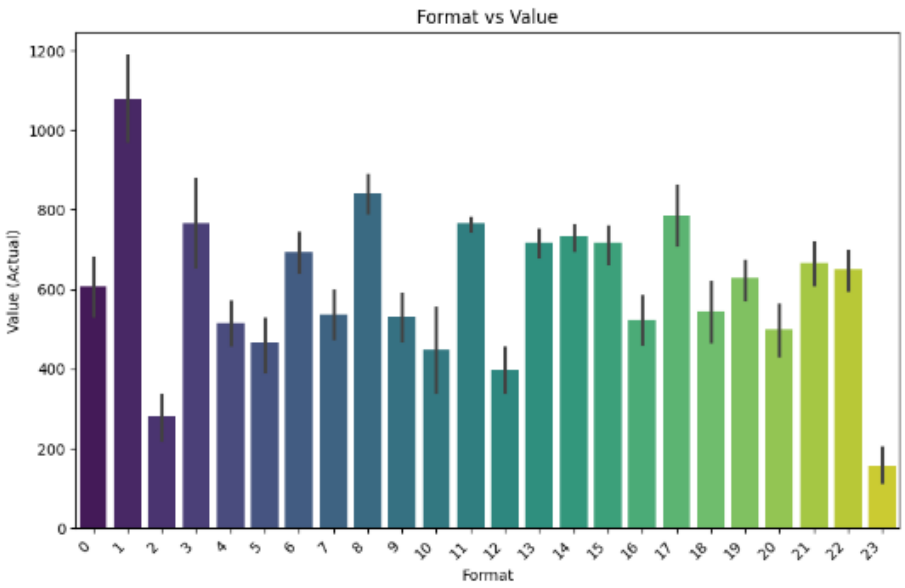
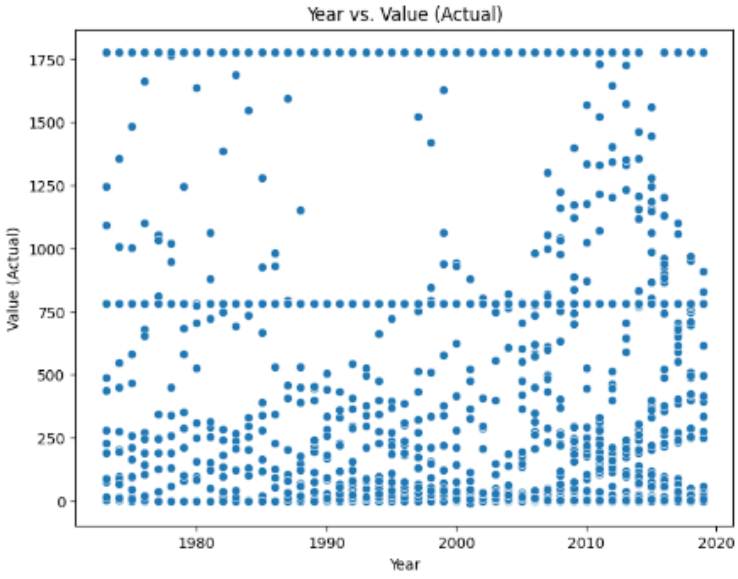
Data Exploration and Preprocessing Template

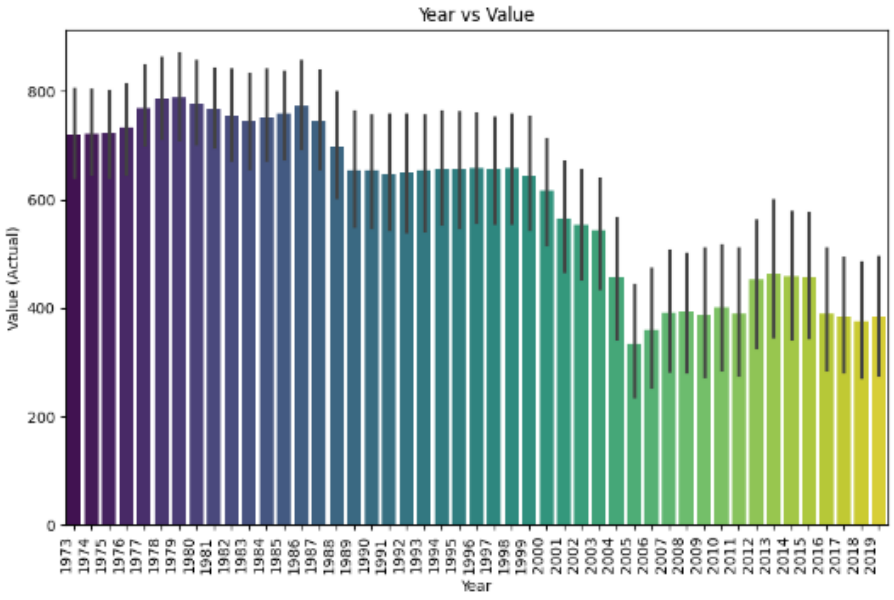
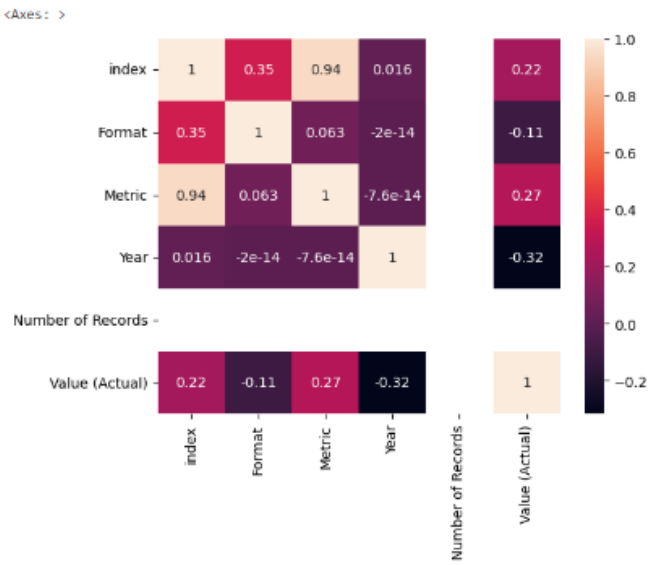
Identifies data sources, assesses quality issues like missing values and duplicates, and implements resolution plans to ensure accurate and reliable analysis.

Section	Description
Data Overview	Dimension: 3008rows x 6columns Descriptive statistics: `df.describe()` index: count 3008.00000, mean 1503.50000, std 868.47913, min 0.00000, 25% 751.75000, 50% 1503.50000, 75% 2255.25000, max 3007.00000 Format: count 3008.000000, mean 10.890625, std 6.996959, min 0.000000, 25% 5.000000, 50% 10.000000, 75% 17.000000, max 23.000000 Metric: count 3008.000000, mean 1.078125, std 0.796701, min 0.000000, 25% 0.000000, 50% 1.000000, 75% 2.000000, max 2.000000 Year: count 3008.000000, mean 1996.000000, std 13.566915, min 1973.000000, 25% 1984.000000, 50% 1996.000000, 75% 2008.000000, max 2019.000000 Number of Records: count 3008.0, mean 1.0, std 0.0, min 1.0, 25% 1.0, 50% 1.0, 75% 1.0, max 1.0 Value (Actual): count 3008.000000, mean 594.928843, std 431.109519, min -7.650944, 25% 116.560241, 50% 781.291237, 75% 781.291237, max 1778.387731
Univariate Analysis	

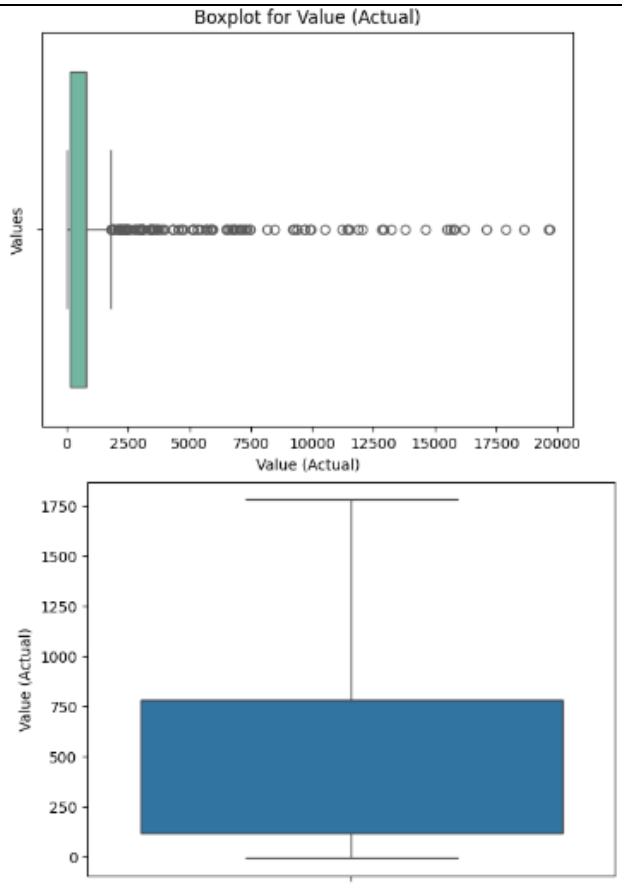

Violin Plot of Value (Actual)
Value (Actual)
2000
1500
1000
500
0


Distribution of Value (Actual)
Frequency
1600
1400
1200
1000
800
600
400
200
0
0
250
500
750
1000
1250
1500
1750
Value (Actual)

Bivariate Analysis	 

	
Multivariate Analysis	

Outliers and Anomalies



Data Preprocessing Code Screenshots

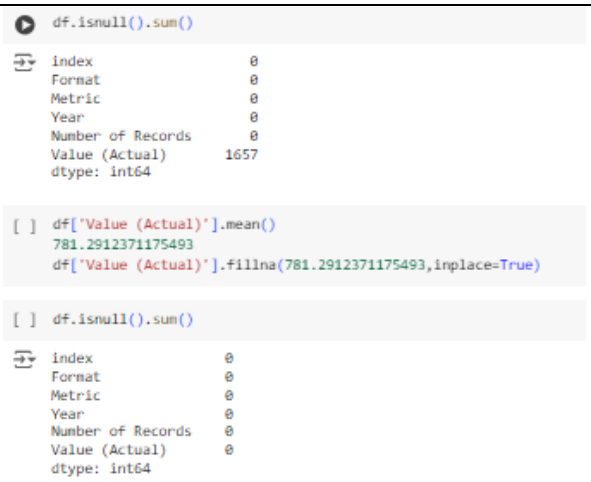
Loading Data

```
[ ] df =pd.read_csv('/content/MusicData.csv')
```

```
[ ] df
```

	index	Format	Metric	Year	Number of Records	Value (Actual)
0	0	CD	Units	1973	1	NaN
1	1	CD	Units	1974	1	NaN
2	2	CD	Units	1975	1	NaN
3	3	CD	Units	1976	1	NaN
4	4	CD	Units	1977	1	NaN
...	...	...	...	...	...	...
3003	3003	Vinyl Single	Value (Adjusted)	2015	1	6.205390
3004	3004	Vinyl Single	Value (Adjusted)	2016	1	5.198931
3005	3005	Vinyl Single	Value (Adjusted)	2017	1	6.339678
3006	3006	Vinyl Single	Value (Adjusted)	2018	1	5.386197
3007	3007	Vinyl Single	Value (Adjusted)	2019	1	6.795946

3008 rows × 6 columns

Handling Missing Data	
Data Transformation	
Feature Engineering	Attached the code in final submission
Save Processed Data	-