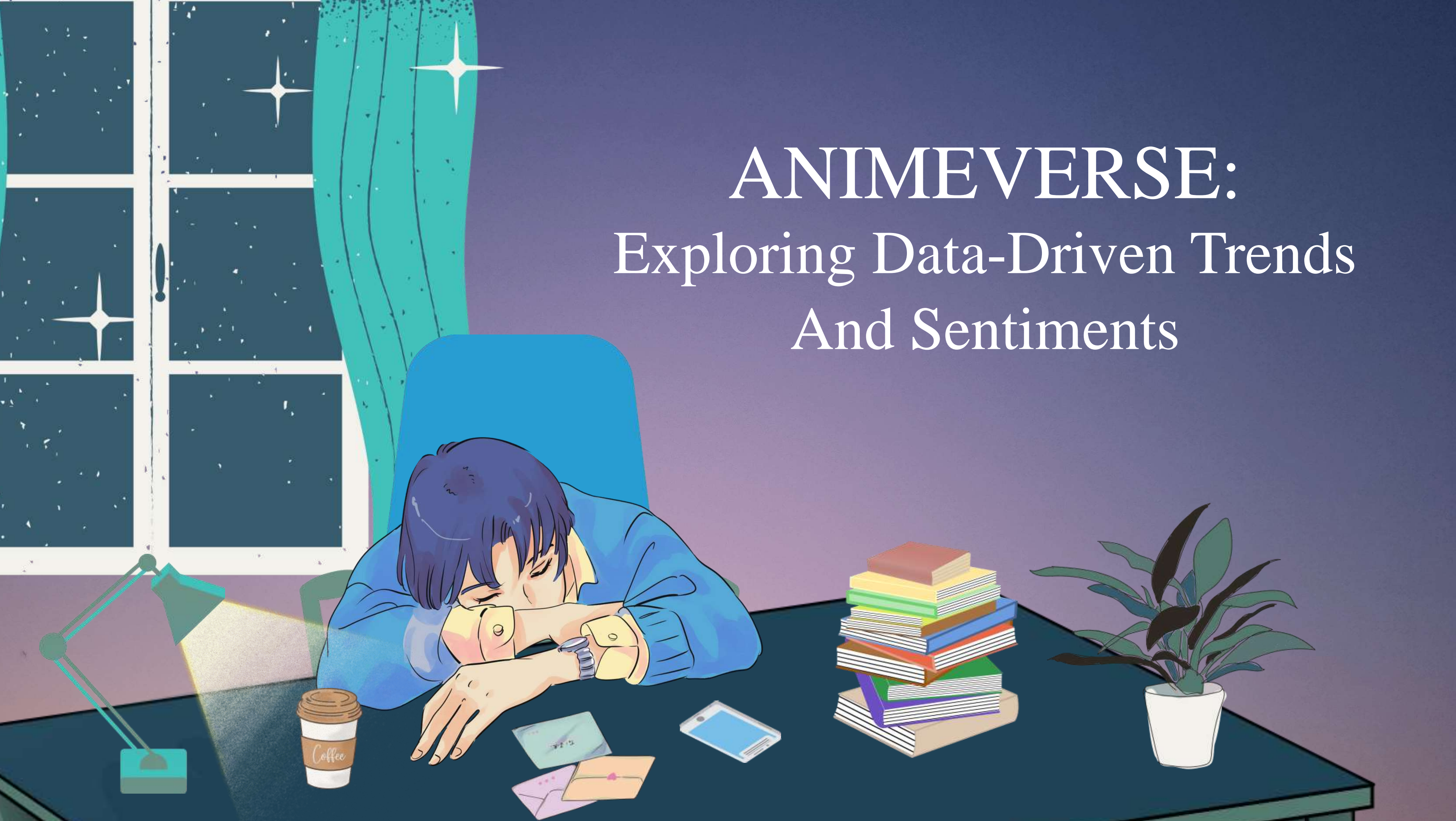


# ANIMEVERSE:

## Exploring Data-Driven Trends And Sentiments







# Agenda

- Introducing Dataset
- Goal
- Data Cleaning
- Exploratory Data Analysis
- Text- Analysis
- Sentiment Analysis
- Random Forest
- Logistic Regression
- Conclusion



# Introduction

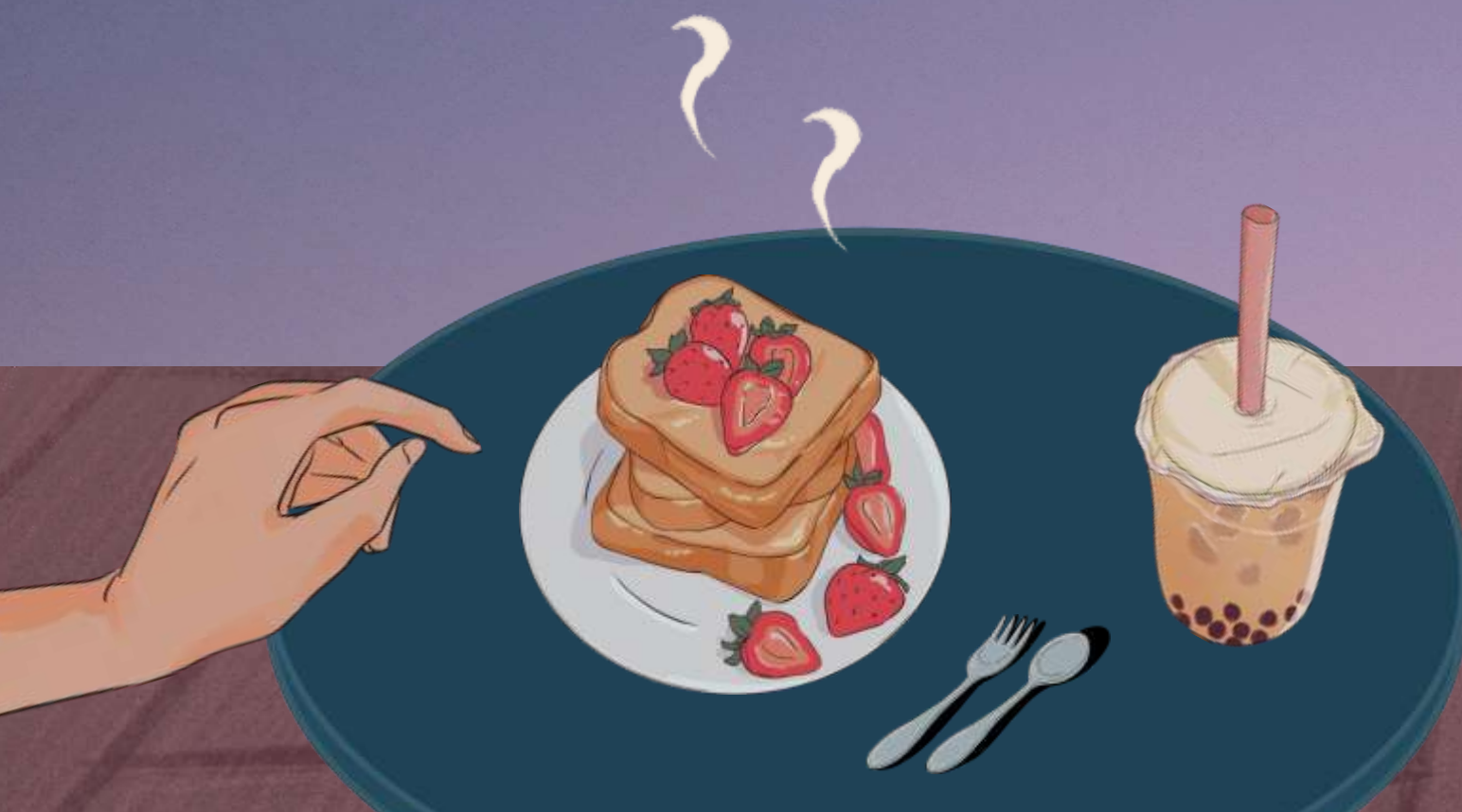
- **Anime Dataset from Kaggle**
- 19,311 observations with 12 variables.
- 7 numeric variables and 5-character variables.
- Consists of characteristics of anime such as title, genre, synopsis, aired dates, number of episodes, member counts, popularity rankings, and scores.
- Contains NAs in the "synopsis", "episodes", "ranked", and "score" columns.
- Data is gathered from various sources, ensuring a diverse collection of anime series information.





# Goal

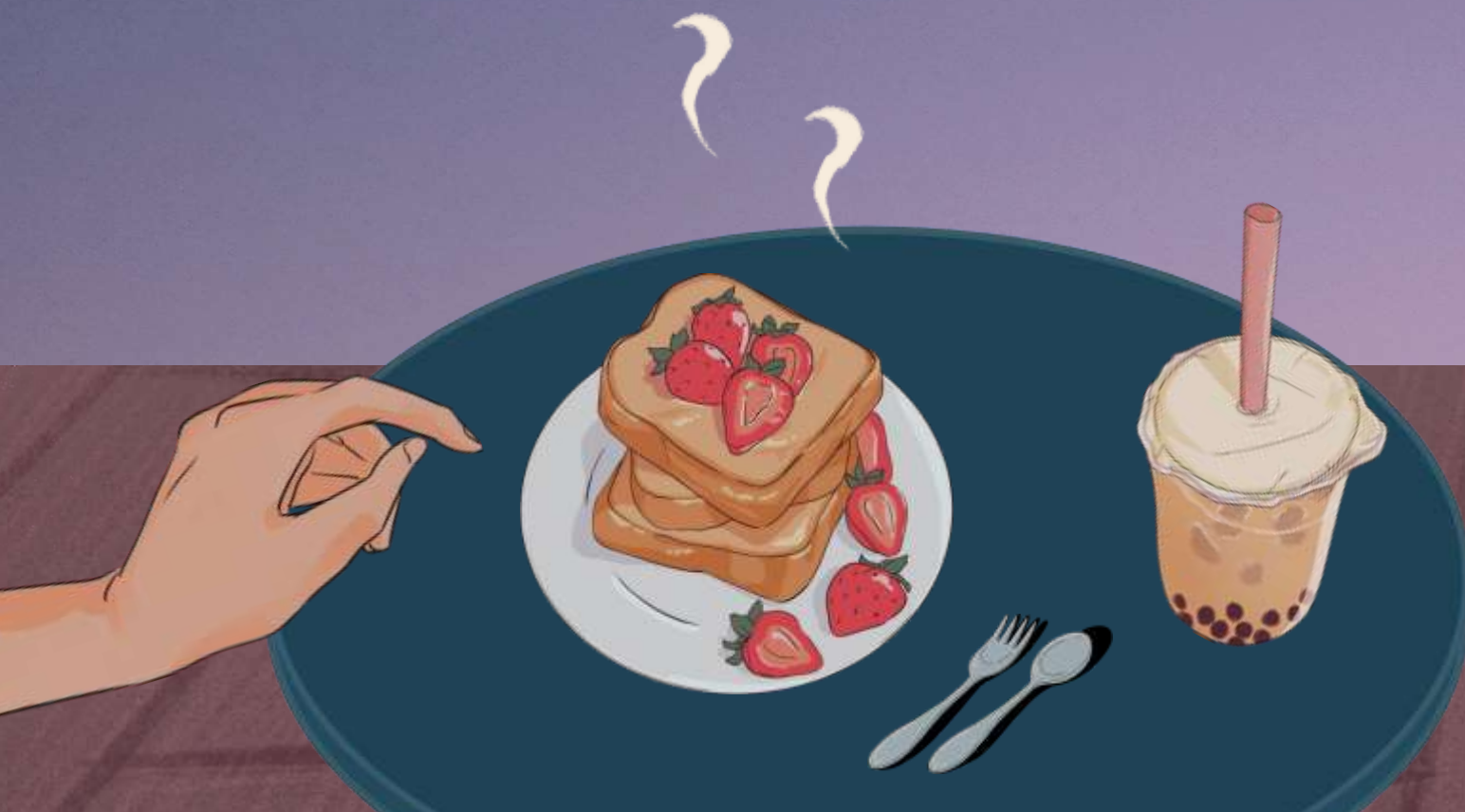
To uncover how genre, episode count, and viewer ratings drive anime popularity, guiding producers and streaming services in strategic content decisions to captivate more fans and grow their audience.





# Data Cleaning

- Removing duplicates
- Filling NA values
- One hot encoding
- Changing date formats





# Summary

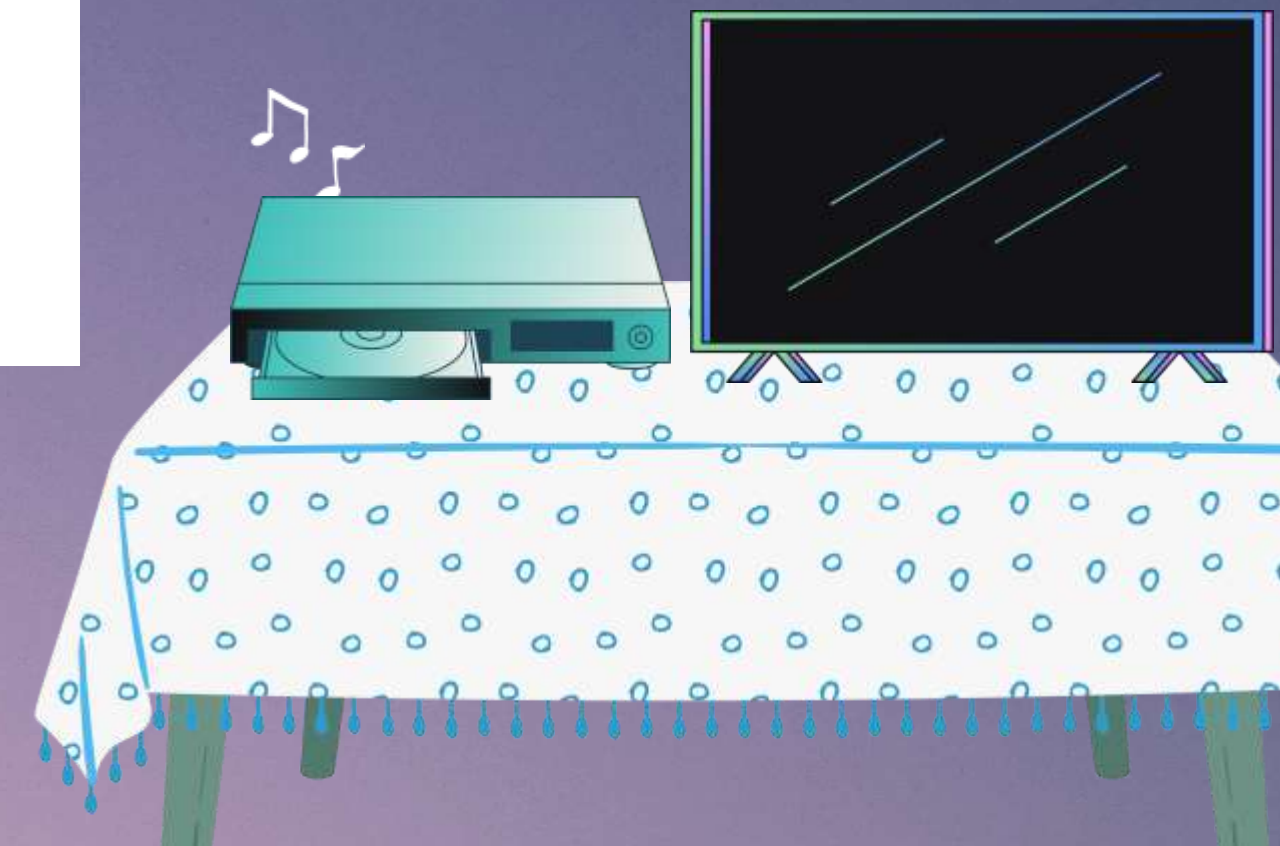
uid	title	synopsis	aired	episodes
Min. : 1	Length:2503	Length:2503	Min. :1963-01-01	Min. : 1
1st Qu.: 1876	Class :character	Class :character	1st Qu.:2004-07-04	1st Qu.: 11
Median : 8909	Mode :character	Mode :character	Median :2010-09-12	Median : 13
Mean :14239			Mean :2008-05-02	Mean : 24
3rd Qu.:28927			3rd Qu.:2015-07-02	3rd Qu.: 26
Max. :40659			Max. :2019-12-04	Max. :1787

members	popularity	ranked	score	img_url
Min. : 54	Min. : 1.0	Min. : 1.0	Min. :7.000	Length:2503
1st Qu.: 12293	1st Qu.: 798.5	1st Qu.: 906.8	1st Qu.:7.220	Class :character
Median : 44933	Median : 2042.0	Median : 1823.5	Median :7.450	Mode :character
Mean : 121774	Mean : 2764.4	Mean : 1991.0	Mean :7.551	
3rd Qu.: 139273	3rd Qu.: 3977.0	3rd Qu.: 2857.0	3rd Qu.:7.780	
Max. :1871043	Max. :16116.0	Max. :14546.0	Max. :9.230	

link	V1	Action	Adventure	Cars
Length:2503	Min. :0	Min. :0.0000	Min. :0.0000	Min. :0.000000
Class :character	1st Qu.:0	1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.000000
Mode :character	Median :0	Median :0.0000	Median :0.0000	Median :0.000000
	Mean :0	Mean :0.3496	Mean :0.2217	Mean :0.003196
	3rd Qu.:0	3rd Qu.:1.0000	3rd Qu.:0.0000	3rd Qu.:0.000000
	Max. :0	Max. :1.0000	Max. :1.0000	Max. :1.000000

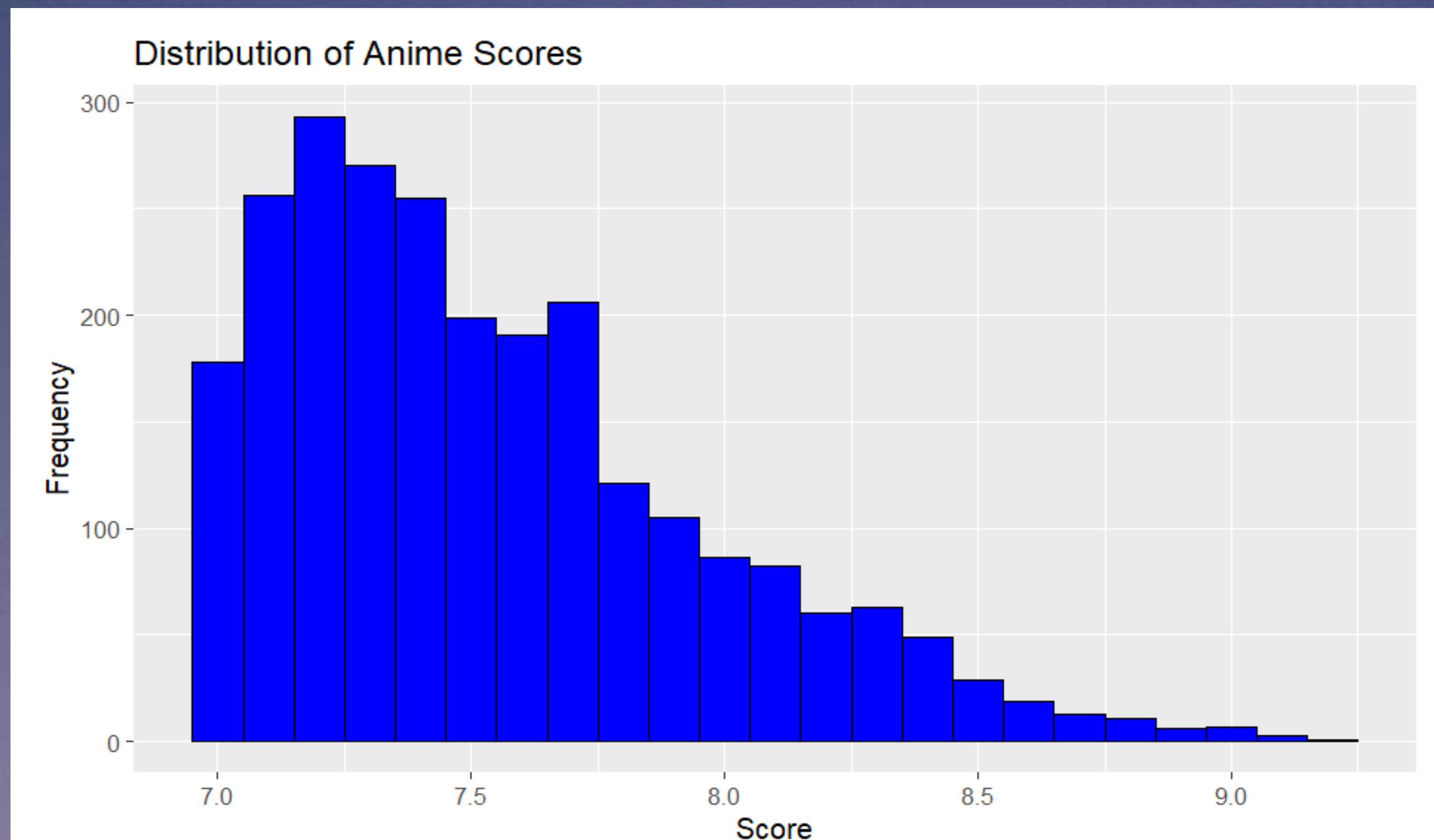




# Exploratory Data Analysis (EDA)

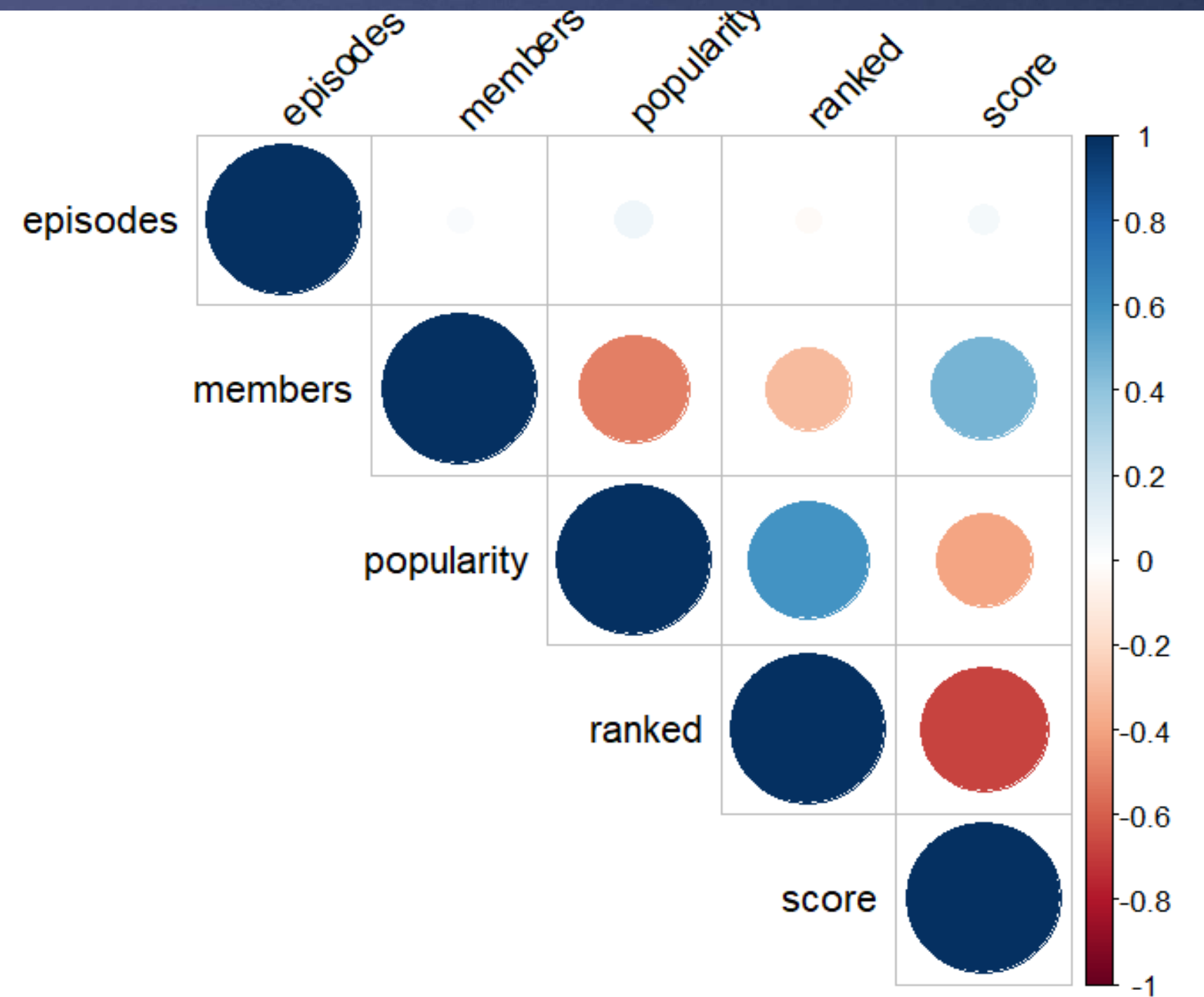


# Distribution Of Anime Score



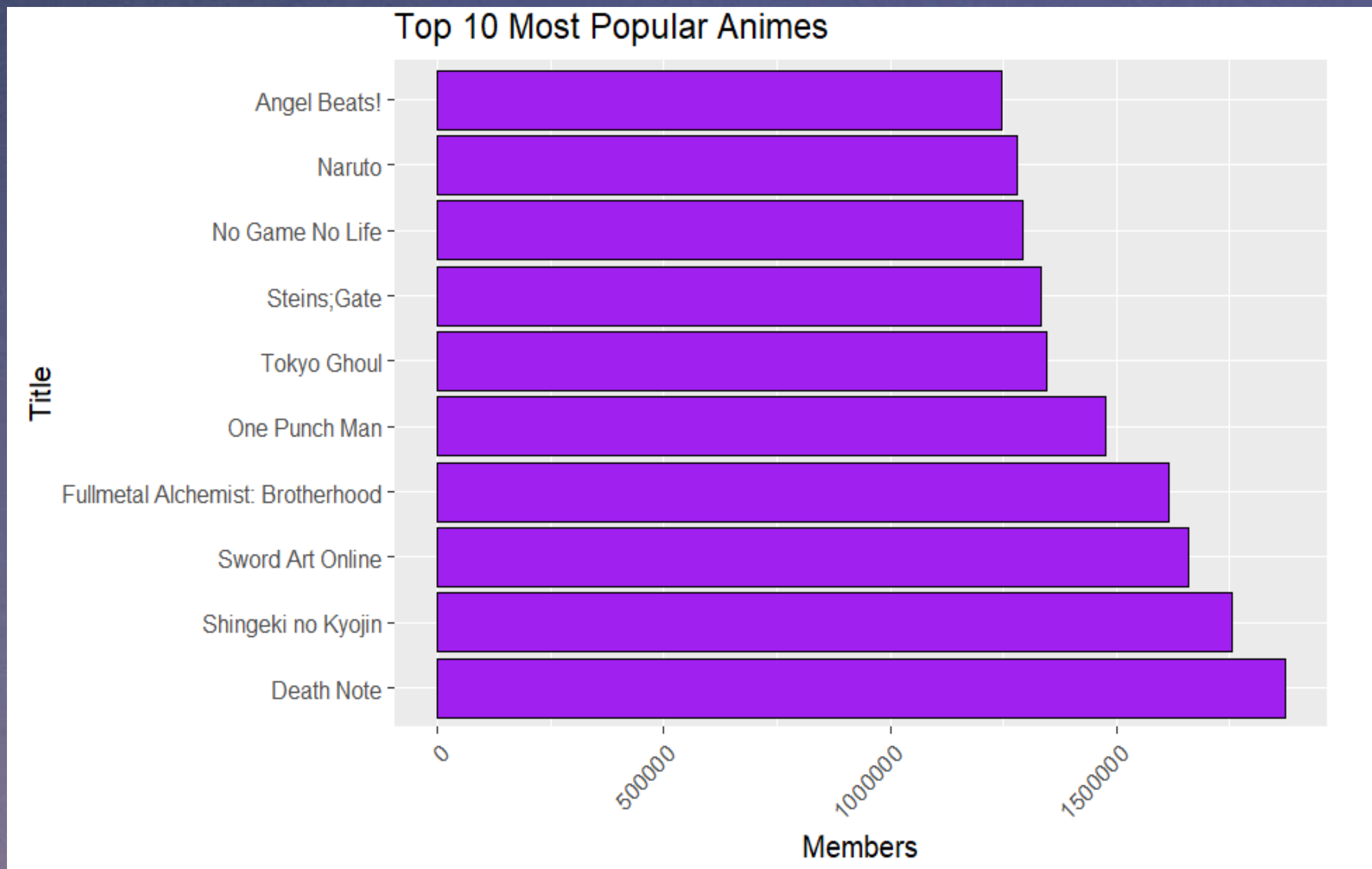


# Correlation Matrix





# Top 10 Most Popular Anime



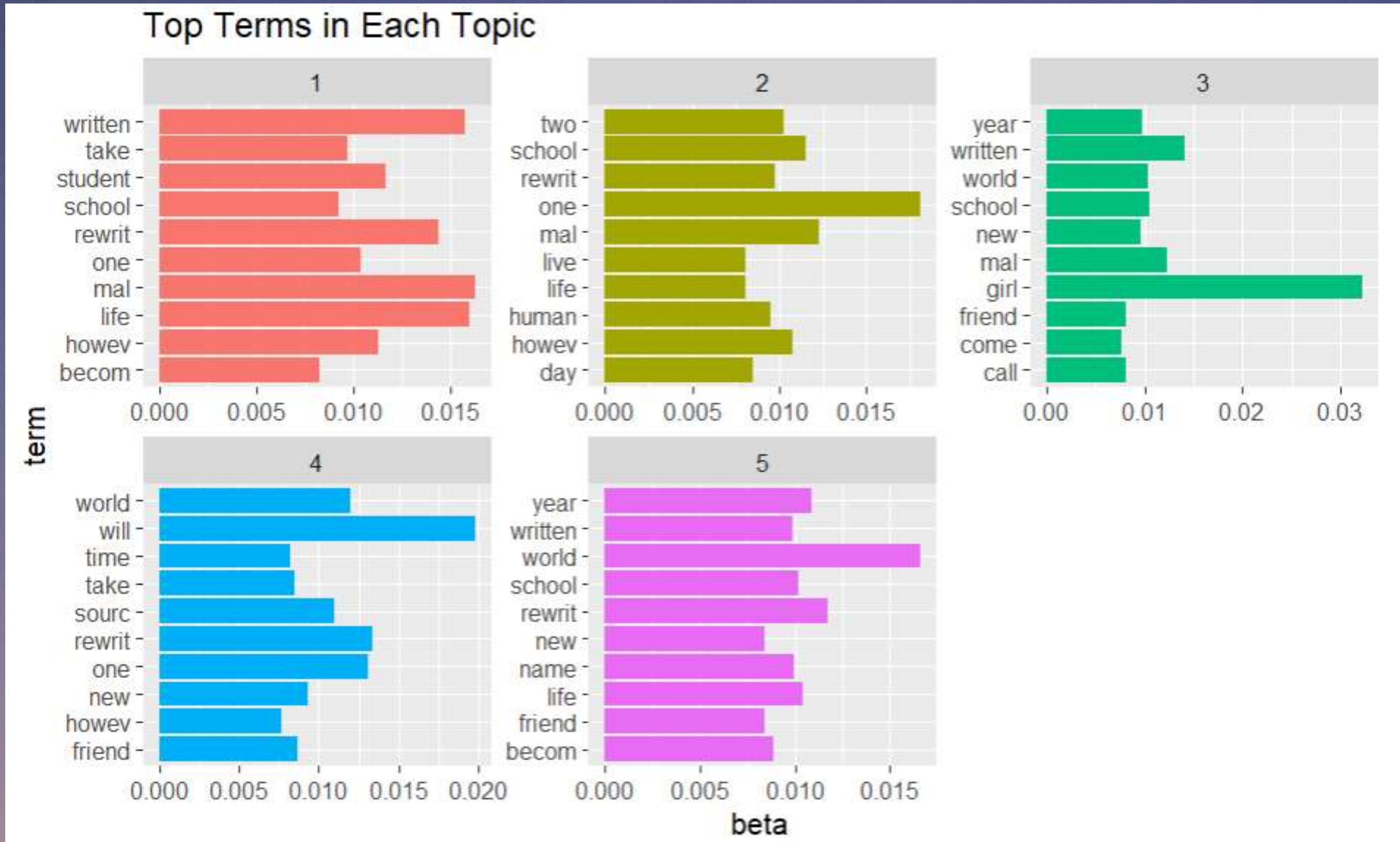




# Text Analysis



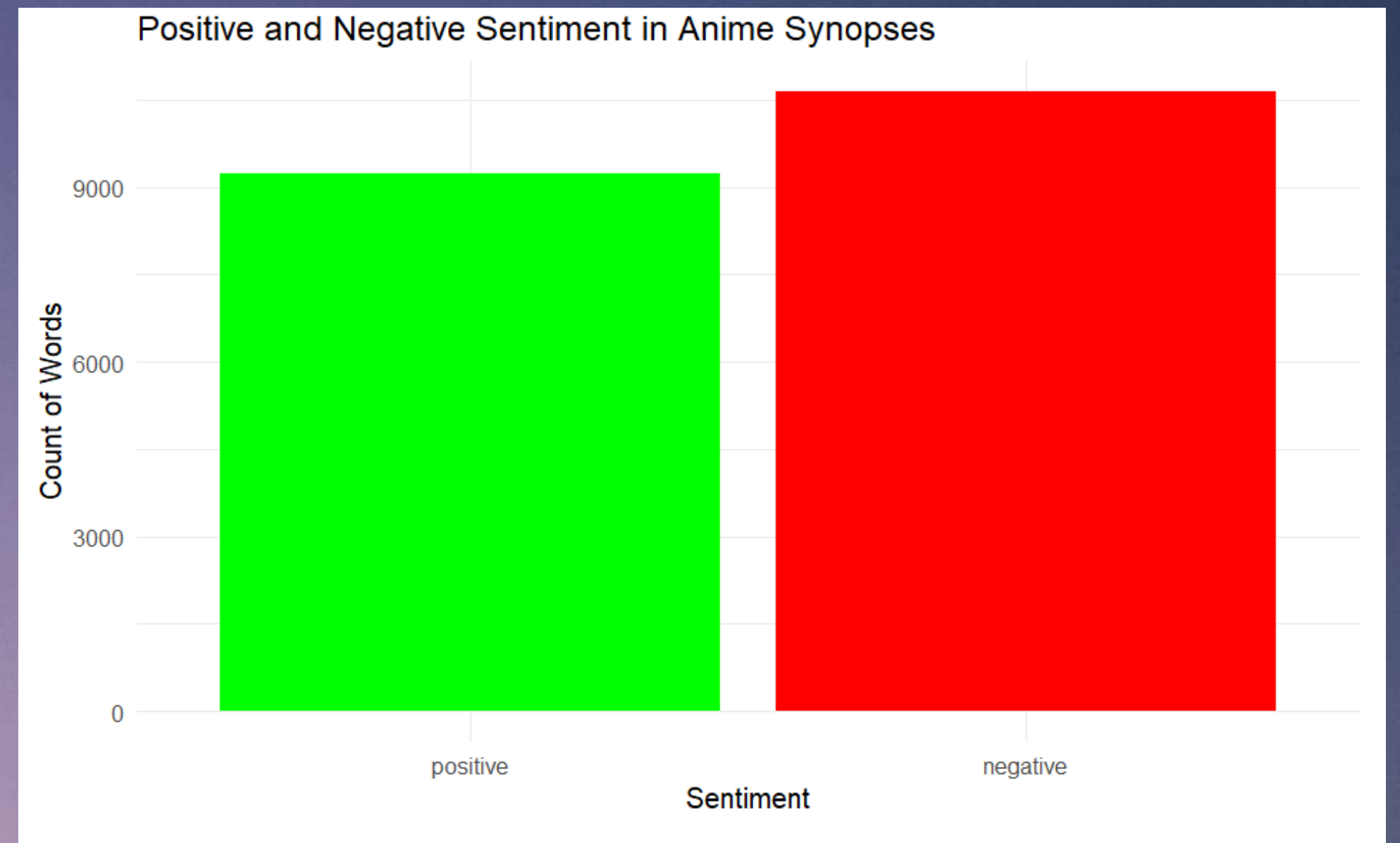
# LDA Topic Modeling







# Sentiment Analysis

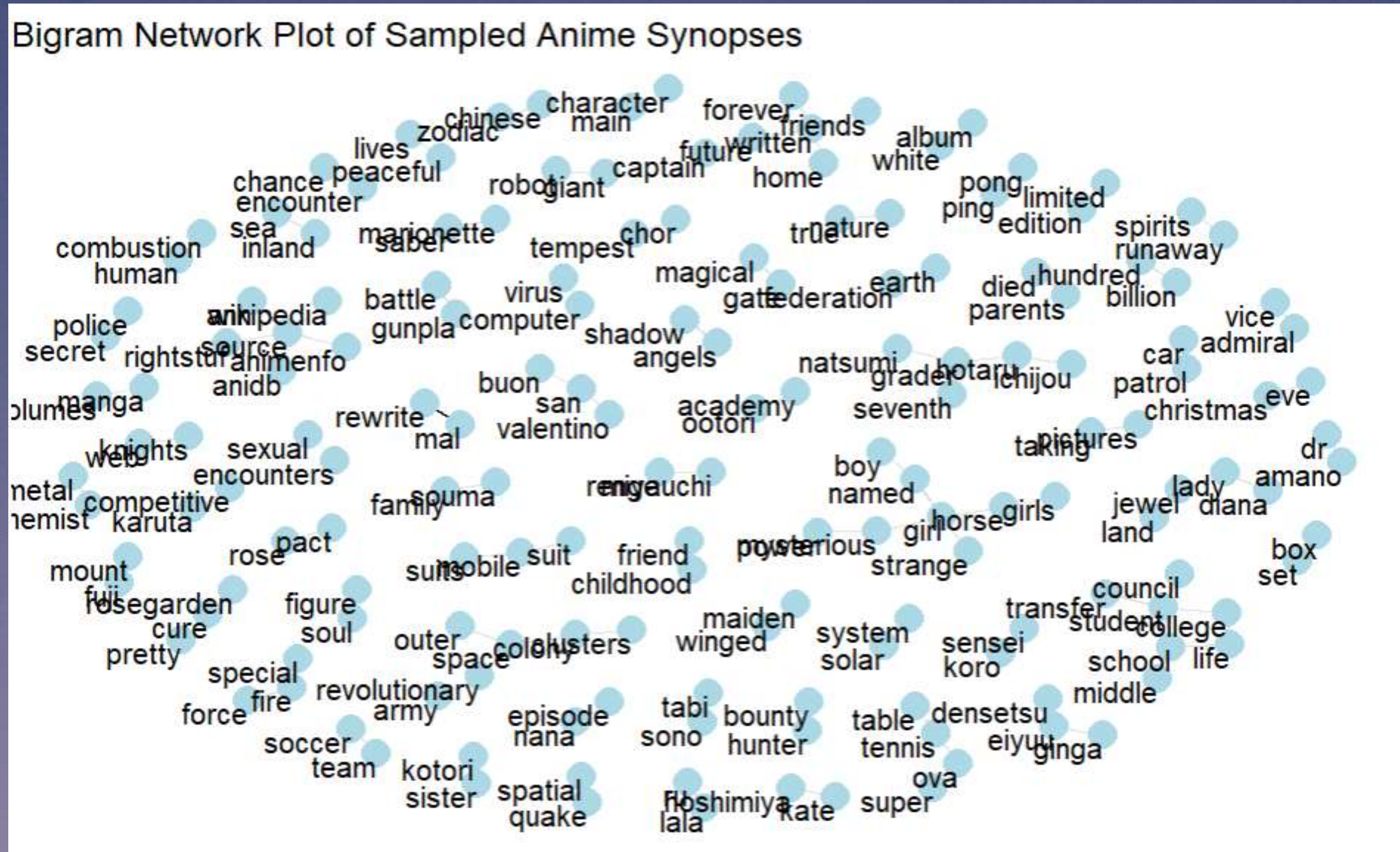






# Bi-grams

# Bigram Network Plot of Sampled Anime Synopses





# Word Cloud





# Machine Learning Models





A decorative string of yellow lights hangs across the top of the slide against a dark blue background.

# Random Forest

```
Mean Squared Error (MSE): 0.005288308  
Mean Absolute Error (MAE): 0.04661905  
Predicted Score for New Data: 8.172735
```



# Linear Regression

Call:

```
lm(formula = score ~ episodes + members + popularity + ranked,  
    data = filtered_anime[split, ])
```

Residuals:

	Min	1Q	Median	3Q	Max
	-1.10078	-0.14873	-0.08191	0.06501	2.04323

Coefficients:

	Estimate	Std. Error	t value	Pr(> t )	
(Intercept)	7.767e+00	1.389e-02	559.309	< 2e-16	***
episodes	2.806e-05	1.265e-04	0.222	0.825	
members	6.927e-07	3.625e-08	19.107	< 2e-16	***
popularity	2.850e-05	3.504e-06	8.135	7.39e-16	***
ranked	-1.838e-04	4.948e-06	-37.158	< 2e-16	***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2803 on 1893 degrees of freedom

Multiple R-squared: 0.5744, Adjusted R-squared: 0.5735

F-statistic: 638.7 on 4 and 1893 DF, p-value: < 2.2e-16

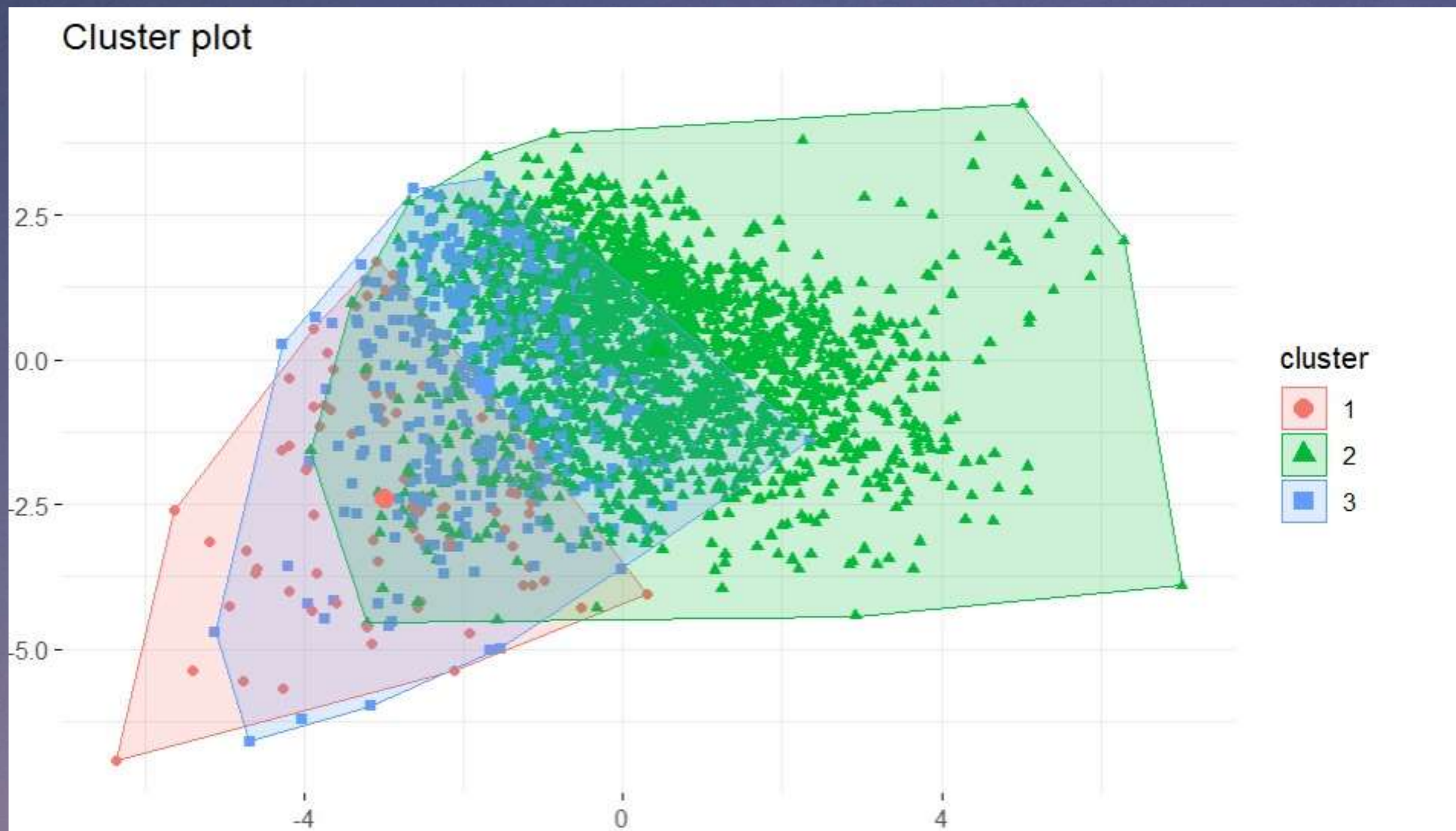
Mean Squared Error (MSE): 0.0554803

Mean Absolute Error (MAE): 0.1697403





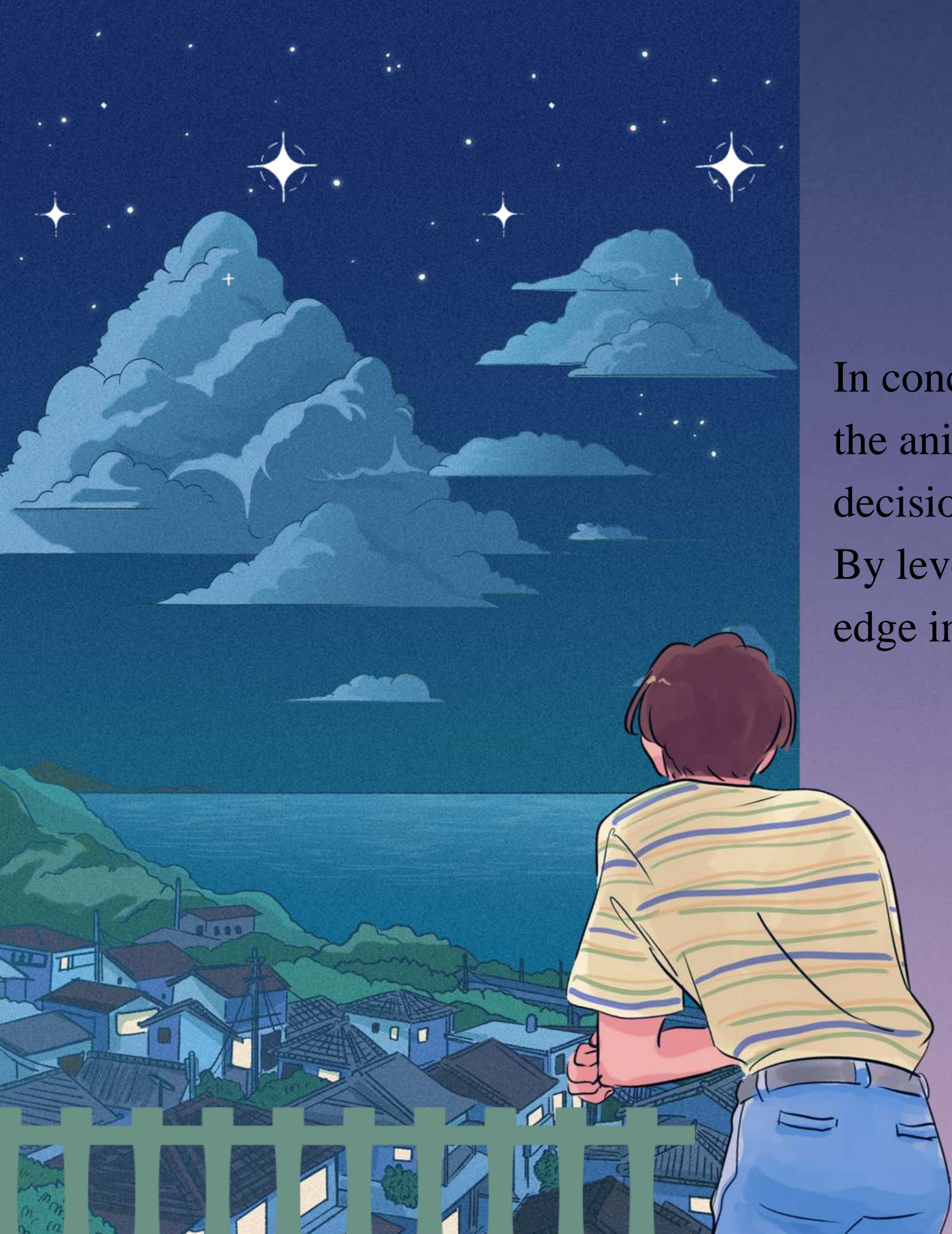
# Cluster Plot





# Conclusion

In conclusion, our analysis provides a comprehensive understanding of the anime dataset, uncovering key insights that can drive strategic decisions in content production, marketing, and audience engagement. By leveraging these insights, the company can enhance its competitive edge in the dynamic and growing anime industry.







THANK YOU FOR LISTENING!

Don't hesitate to ask any questions!

