Data Analysis – Popular Games

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Data Understanding

- Main Games dataset (Maingames_DS_dataset.csv) is a dataset that contains followers data of various types of games in three countries (Indonesia, Philippines, and Vietnam) that have gender categories, and have other variables such as broadcast, and so on.

Data Preprocessing

- This stage performs the process of cleaning data by deleting / unifying lost data / different from average data / often appears.

- This stage performs the process of cleaning data by bringing together variable countries together with gender to group gender data of each game in each country.

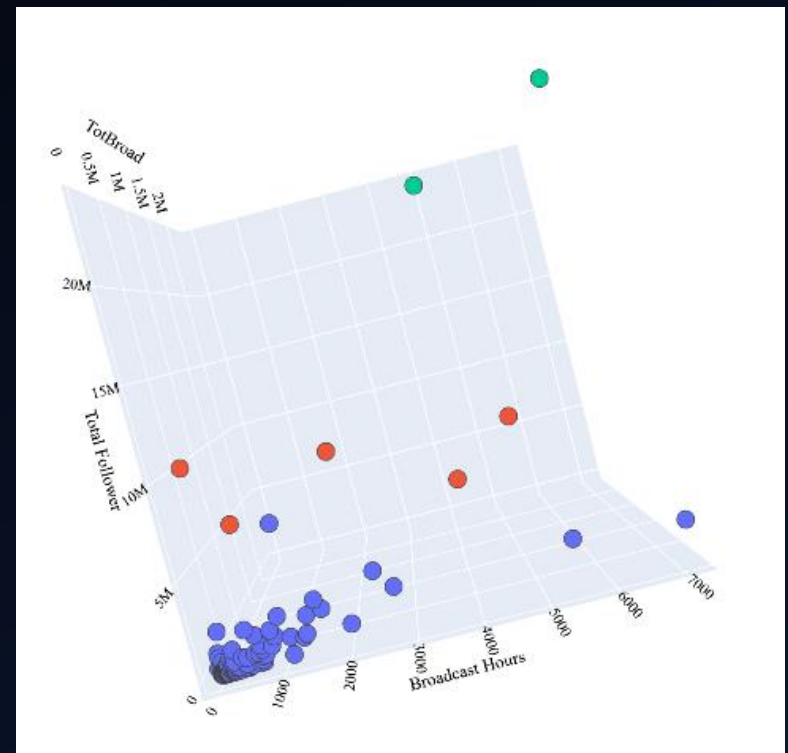| CounGen	Game	Total Follower	Broadcast Hours
ID Female	Counter-Strike: Global Offensive	7074.0	165
ID Female	Dead by Daylight	10783.0	102
ID Female	Euro Truck Simulator 2	13141.0	131
ID Female	Free Fire - Battlegrounds	1015381.0	1192
ID Female	Grand Theft Auto V	22492.0	343

Feature Selection

- Check the correlation between variables and targets (followers) to find out the effect of variables on the data used.

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Total Follower & Broadcast Hours :
 Ttest_indResult(statistic=3.0745095529585353, pvalue=0.006533396465344967)
TOtal Follower & TotBroad :
 Ttest_indResult(statistic=3.075452336825555, pvalue=0.006519955445319043)
Broadcast Hours & TotBroad :
 Ttest_indResult(statistic=3.200920478468549, pvalue=0.0049524584270078005)
```
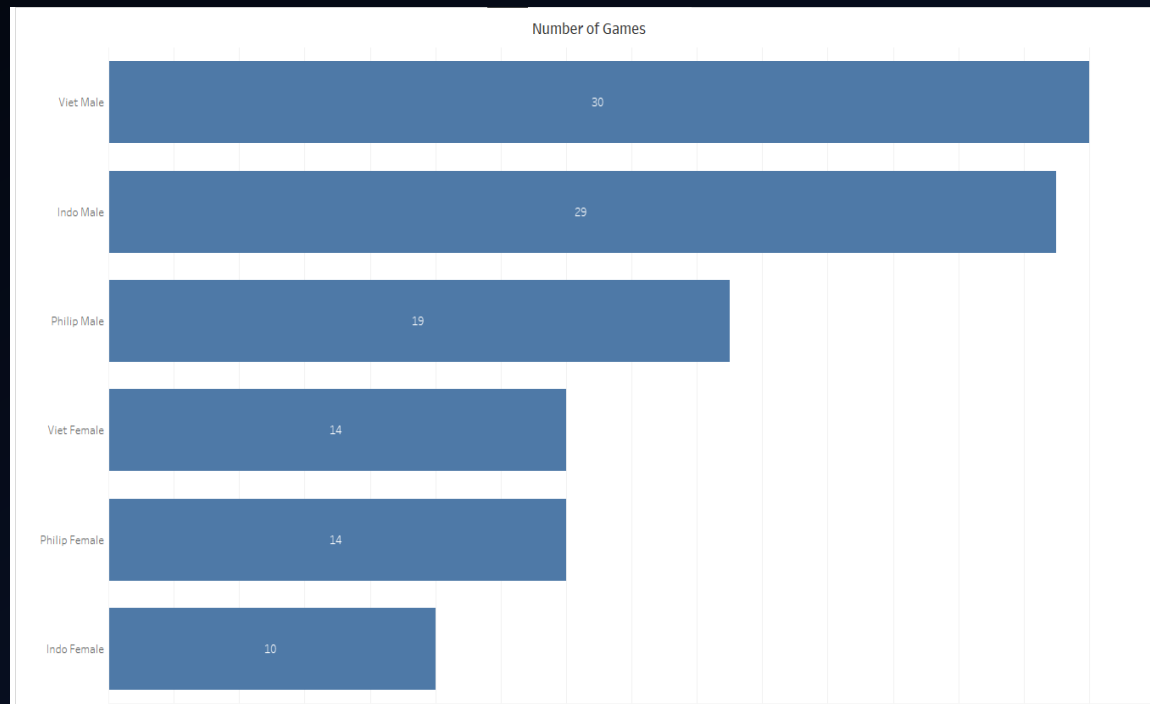
Clustering

- Grouping data using K-Means Clustering is divided into 3 categories (low, medium, hight) to facilitate data recognition.

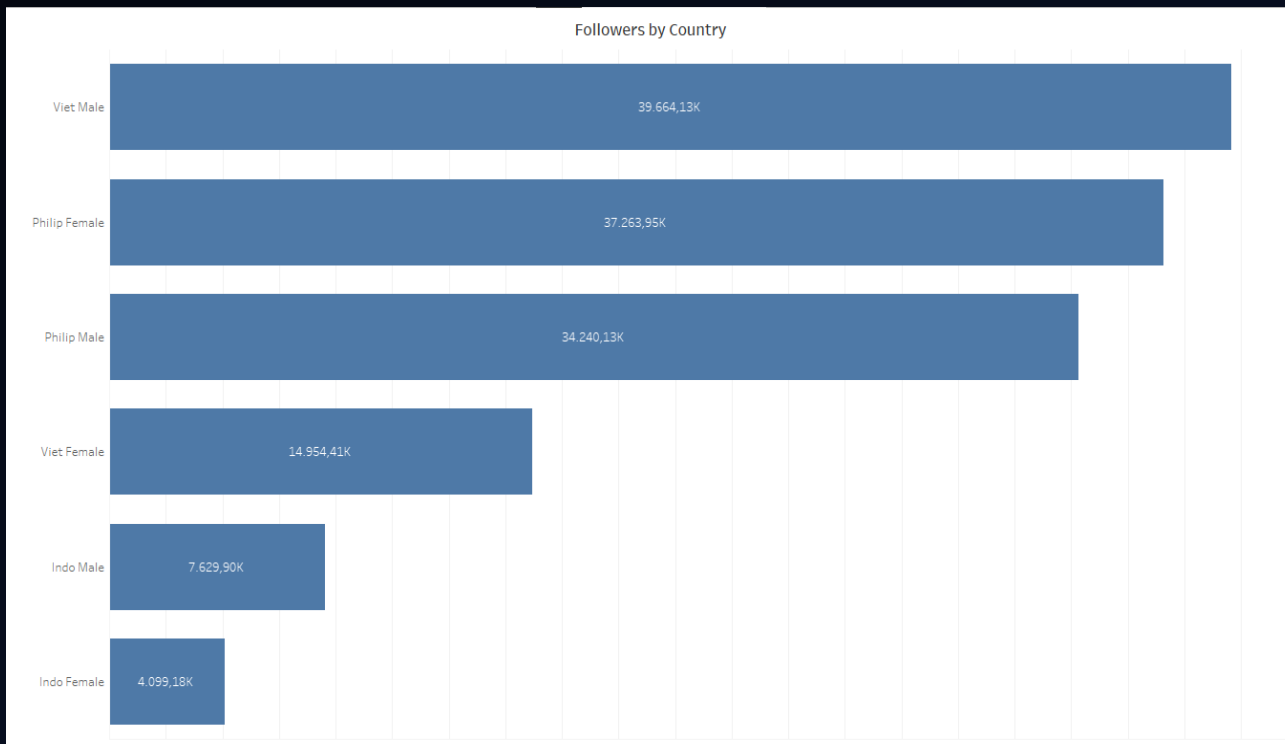| CounGen	Game	Total Follower	Broadcast Hours	TotBroad	Cluster
ID Female	Counter-Strike: Global Offensive	7074.0	165	42.872727	Low
ID Female	Dead by Daylight	10783.0	102	105.715686	Low
ID Female	Euro Truck Simulator 2	13141.0	131	100.312977	Low
ID Female	Free Fire - Battlegrounds	1015381.0	1192	851.829698	Low
ID Female	Grand Theft Auto V	22492.0	343	65.574344	Low

Number of the Games

- Vietnam (male) is the largest user of the type of game with the number of 30 games, second place Indonesia (male) with the number of 29 games, here is a graph of the order of the number of games in each country based on gender.

Number of Games

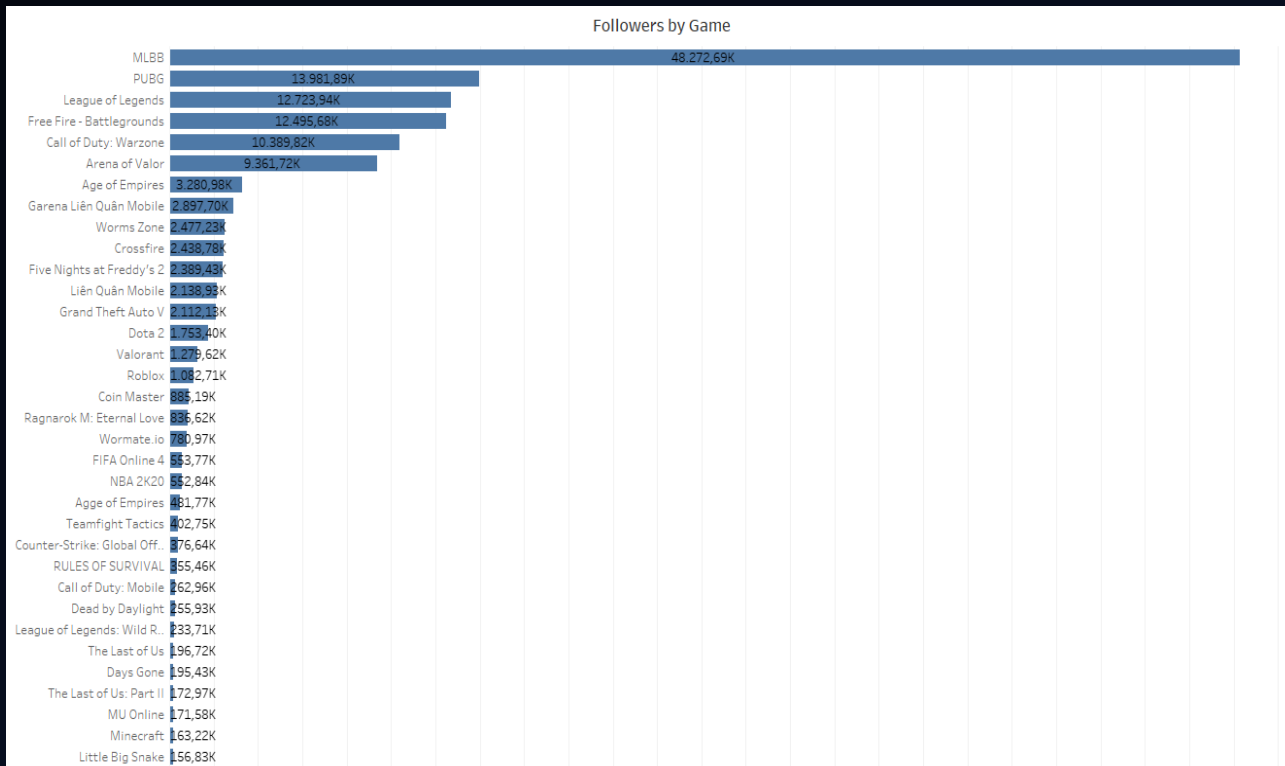|	
Viet Male	30
Indo Male	29
Philip Male	19
Viet Female	14
Philip Female	14
Indo Female	10

Followers by Country

- Vietnam (male) has the most followers with a total of 39,664.13K, second place is the Philippines (female) with a total of 37,263.95K. Here is a sequence of the number of followers in each country based on gender.

Followers by Country

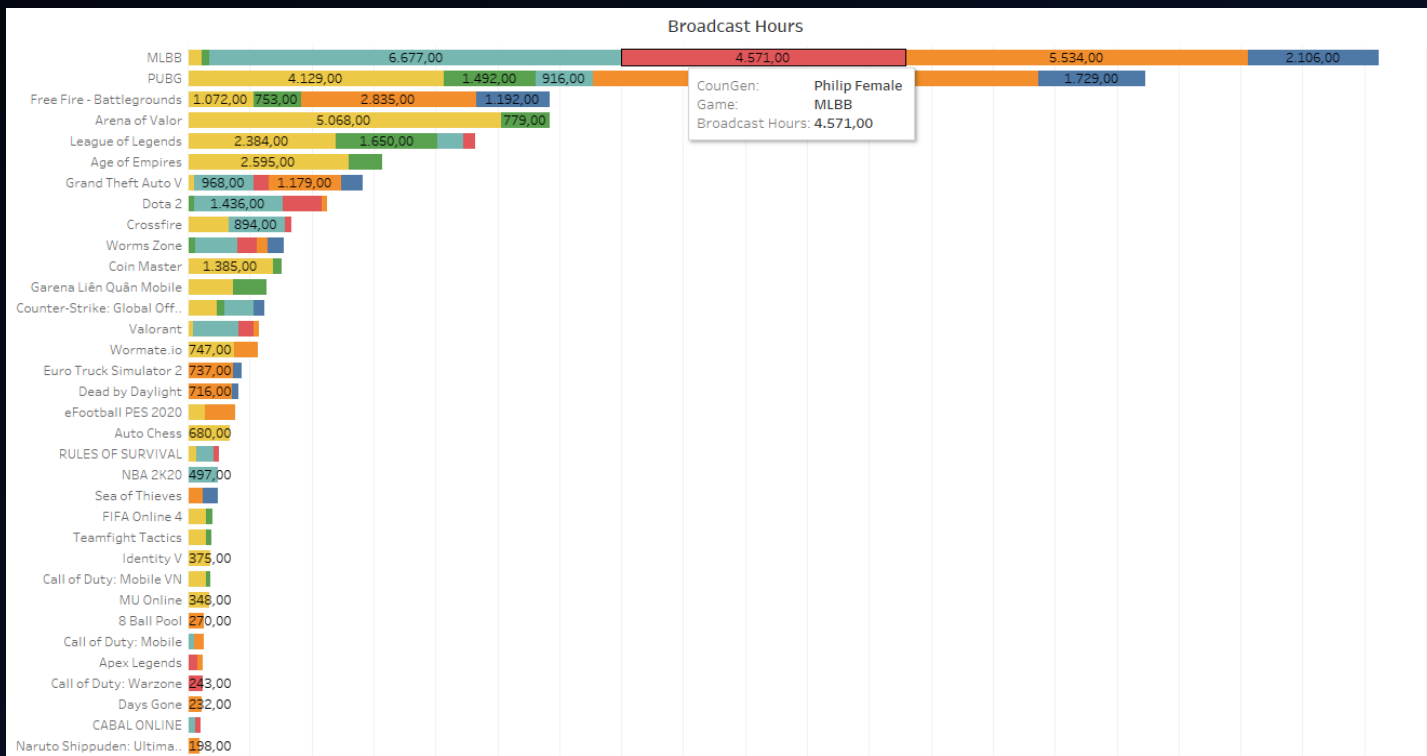|	
Viet Male	39.664,13K
Philip Female	37.263,95K
Philip Male	34.240,13K
Viet Female	14.954,41K
Indo Male	7.629,90K
Indo Female	4.099,18K

Followers by Game

- The most popular game is MLBB with 48,272.69K, followed by PUBG with 13,981.89K. Here is a complete graph of the order of games based on followers.

Followers by Game

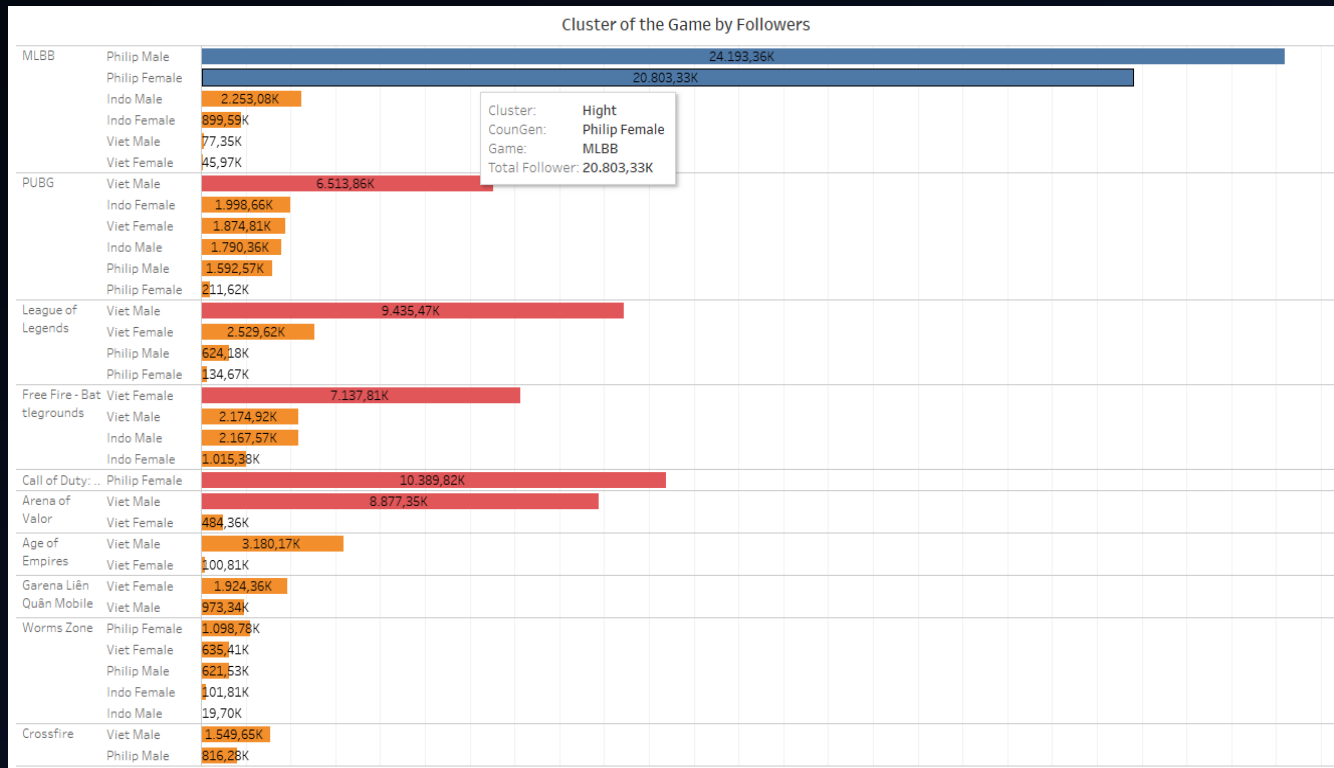| Game	Followers
MLBB	48.272,69K
PUBG	13.981,89K
League of Legends	12.723,94K
Free Fire - Battlegrounds	12.495,68K
Call of Duty: Warzone	10.389,82K
Arena of Valor	9.361,72K
Age of Empires	3.280,98K
Garena Liên Quân Mobile	2.897,70K
Worms Zone	2.477,23K
Crossfire	2.438,78K
Five Nights at Freddy's 2	2.389,43K
Liên Quân Mobile	2.138,93K
Grand Theft Auto V	2.112,13K
Dota 2	1.753,40K
Valorant	1.279,62K
Roblox	1.082,71K
Coin Master	885,19K
Ragnarok M: Eternal Love	836,62K
Wormate.io	780,97K
FIFA Online 4	553,77K
NBA 2K20	552,84K
Agge of Empires	481,77K
Teamfight Tactics	402,75K
Counter-Strike: Global Off..	376,64K
RULES OF SURVIVAL	355,46K
Call of Duty: Mobile	262,96K
Dead by Daylight	255,93K
League of Legends: Wild R..	233,71K
The Last of Us	196,72K
Days Gone	195,43K
The Last of Us: Part II	172,97K
MU Online	171,58K
Minecraft	163,22K
Little Big Snake	156,83K

Broadcast Hours

- The number of followers is greatly influenced by the number of broadcast hours where the higher the value of the broadcast hour, the more followers.
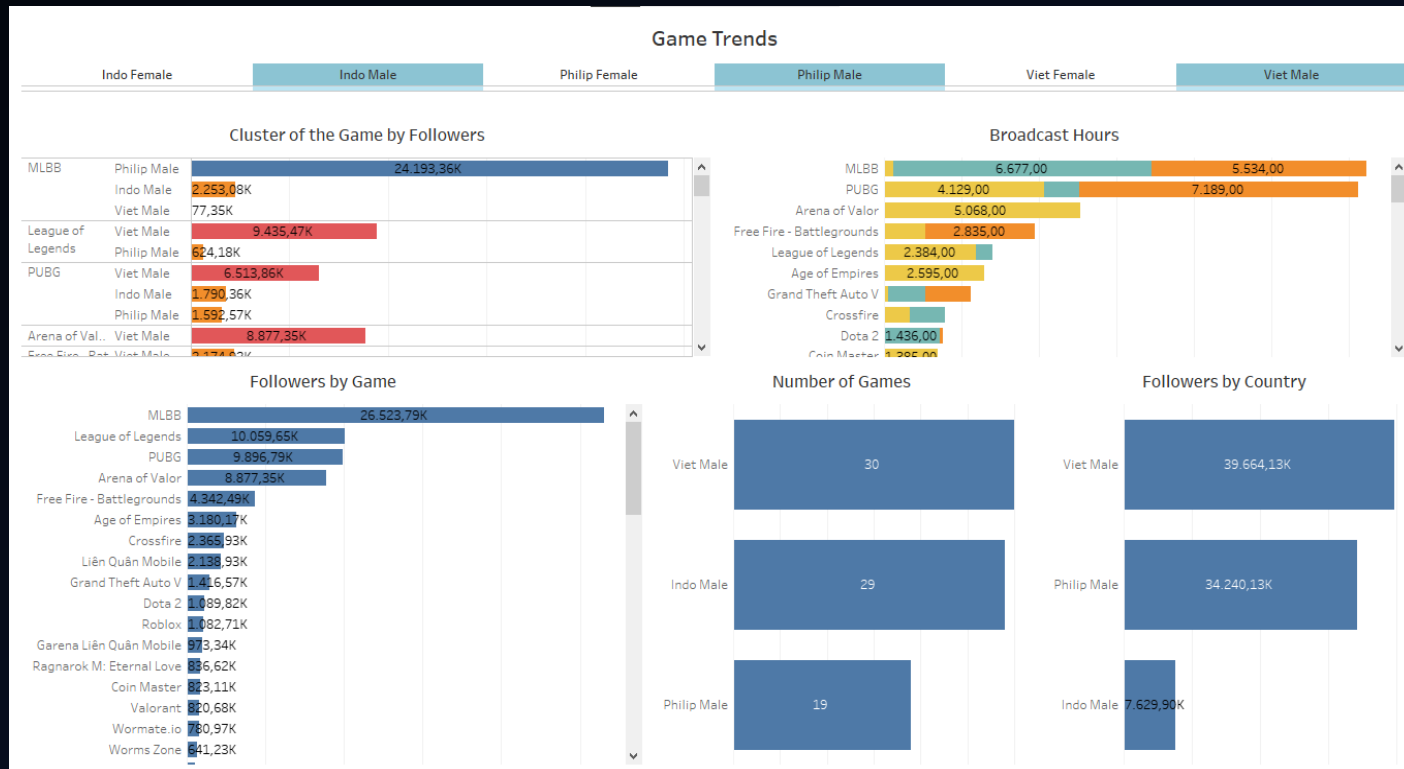
Cluster of the Game by Followers

- Grouping games based on followers in each gender-country can be used as a benchmark for the development of game popularity.
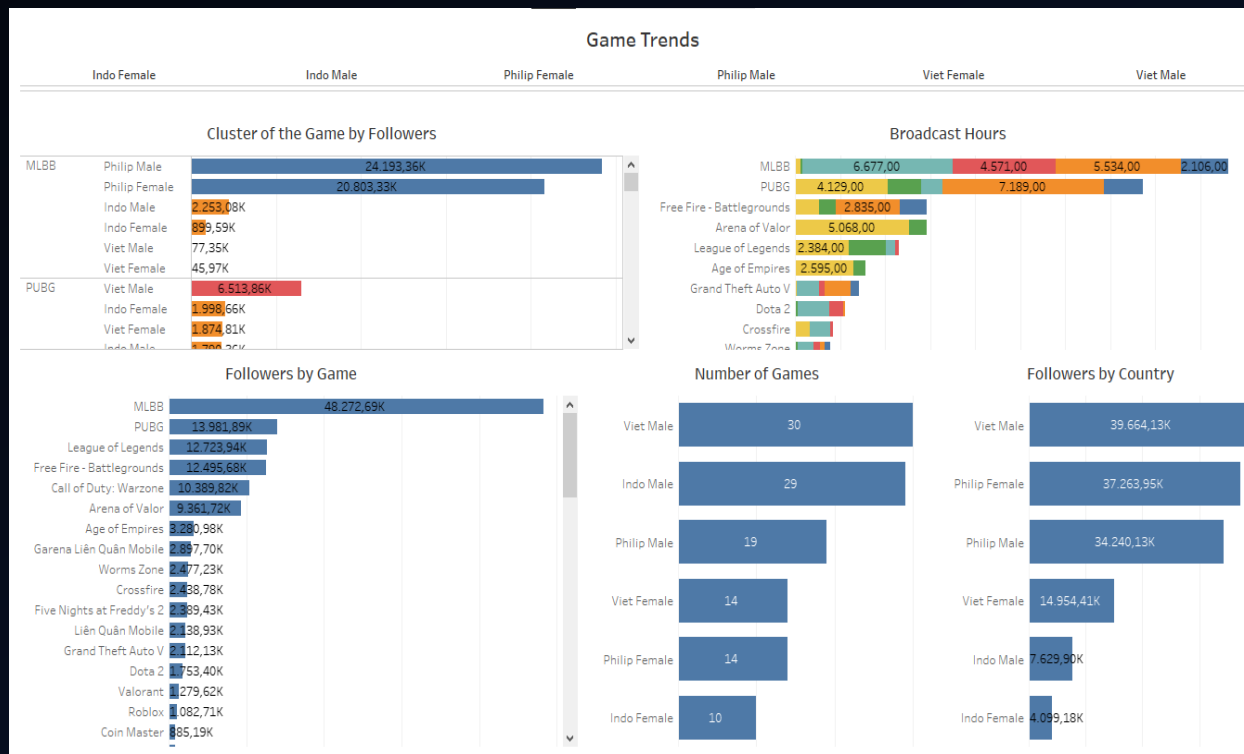
Sample Popularity of the Games

- Here are some samples of gaming popularity from all three countries based on male gender.

Dashboard

- The dashboard that has been created contains a summary of the analysis that has been done as a thorough insight into the development of the popularity of the game.

Conclusion

- To increase the number of followers each then the first thing to do is to increase the number of broadcast hours because the correlation of broadcast hour to followers is very important.

Thank you.