Analyze Twitch Gaming Data

Analyze Data with SQL
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1. Unique game and channels

1. What are the unique game and channels in stream table?

- On the right, there are two tables showcasing valuable insights. The first table highlights the distinct games currently featured on Twitch streams, offering a comprehensive overview of the diverse gaming content available. The second table provides a glimpse into the unique channels actively streaming, presenting a snapshot of the varied and dynamic creator landscape on the platform..

```
SELECT DISTINCT game FROM stream

SELECT DISTINCT channel FROM chat
```

Games
League of Legends
DayZ
Dota 2
Heroes of the Storm
Counter-Strike: Global Offensive
Hearthstone: Heroes of Warcraft
The Binding of Isaac: Rebirth
Agar.io
Gaming Talk Shows
Rocket League
World of Tanks

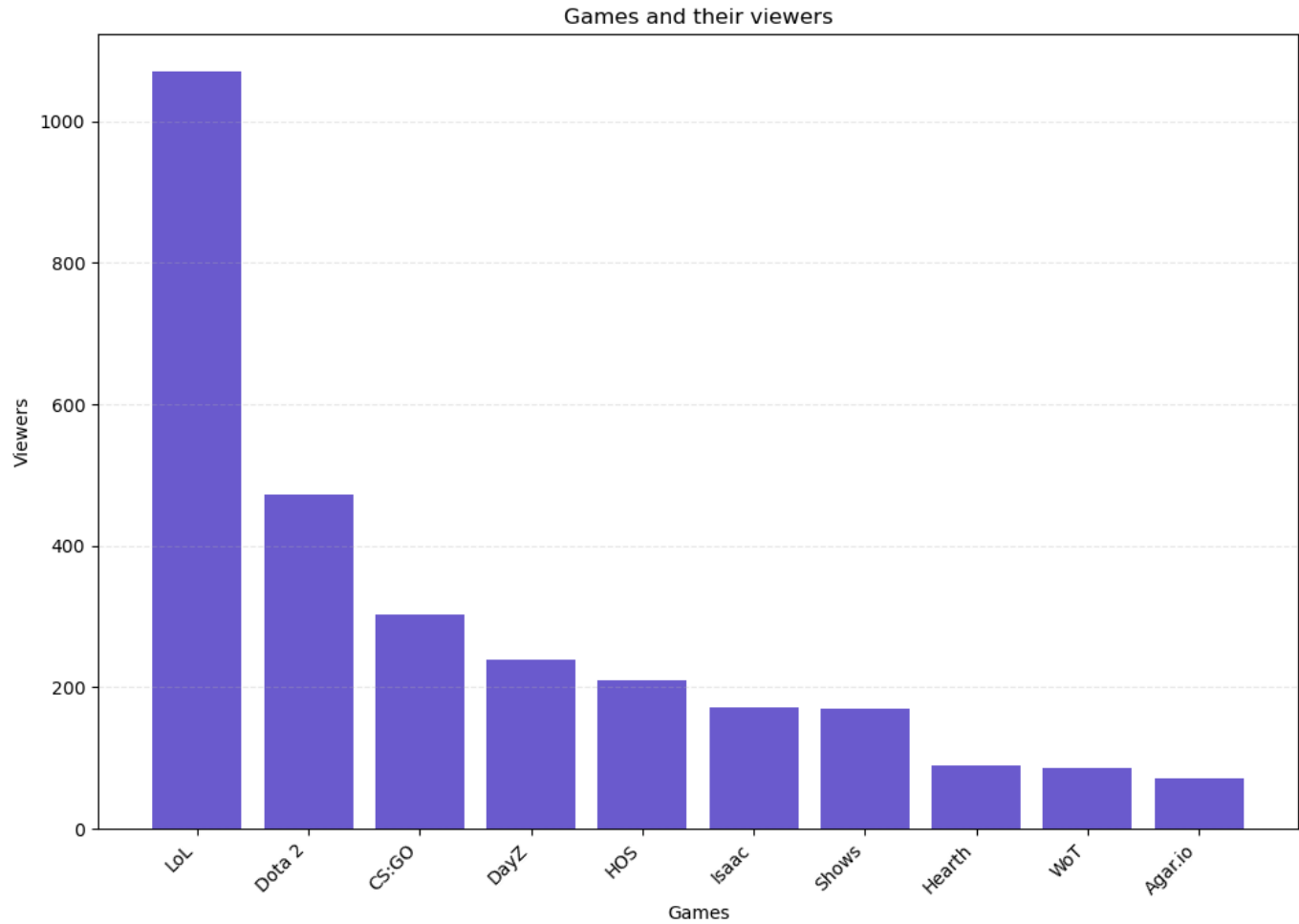| Channels |
|---|
| channel |
| jerry |
| elaine |
| frank |
| estelle |
| george |
| newman |
| susan |
| kramer |
| morty |
| helen |

2. Most popular games

2. What are the most popular games on stream table?

- In the left table, you can observe the player counts for each game on Twitch streams. Notably, League of Legends, commonly known as LOL, stands out as the most popular game, boasting twice as many players on Twitch as the second-ranked game

```sql
SELECT game, COUNT(player) as
'Players'
FROM stream
GROUP BY 1
ORDER BY 2 DESC
```

Games	Players
League of Legends	1070
Dota 2	472
Counter-Strike: Global Offensive	302
DayZ	239
Heroes of the Storm	210
The Binding of Isaac: Rebirth	171
Gaming Talk Shows	170
Hearthstone: Heroes of Warcraft	90
World of Tanks	86
Agar.io	71
Rocket League	49
SpeedRunners	20
ARK: Survival Evolved	19
Duck Game	5
Fallout 3	3
Batman: Arkham Knight	3
Breaking Point	2
Block N Load	2
Devil May Cry 4: Special Edition	1

The chart exhibits a right-skewed distribution, indicating that the first four games receive significantly higher views compared to the remaining ones.

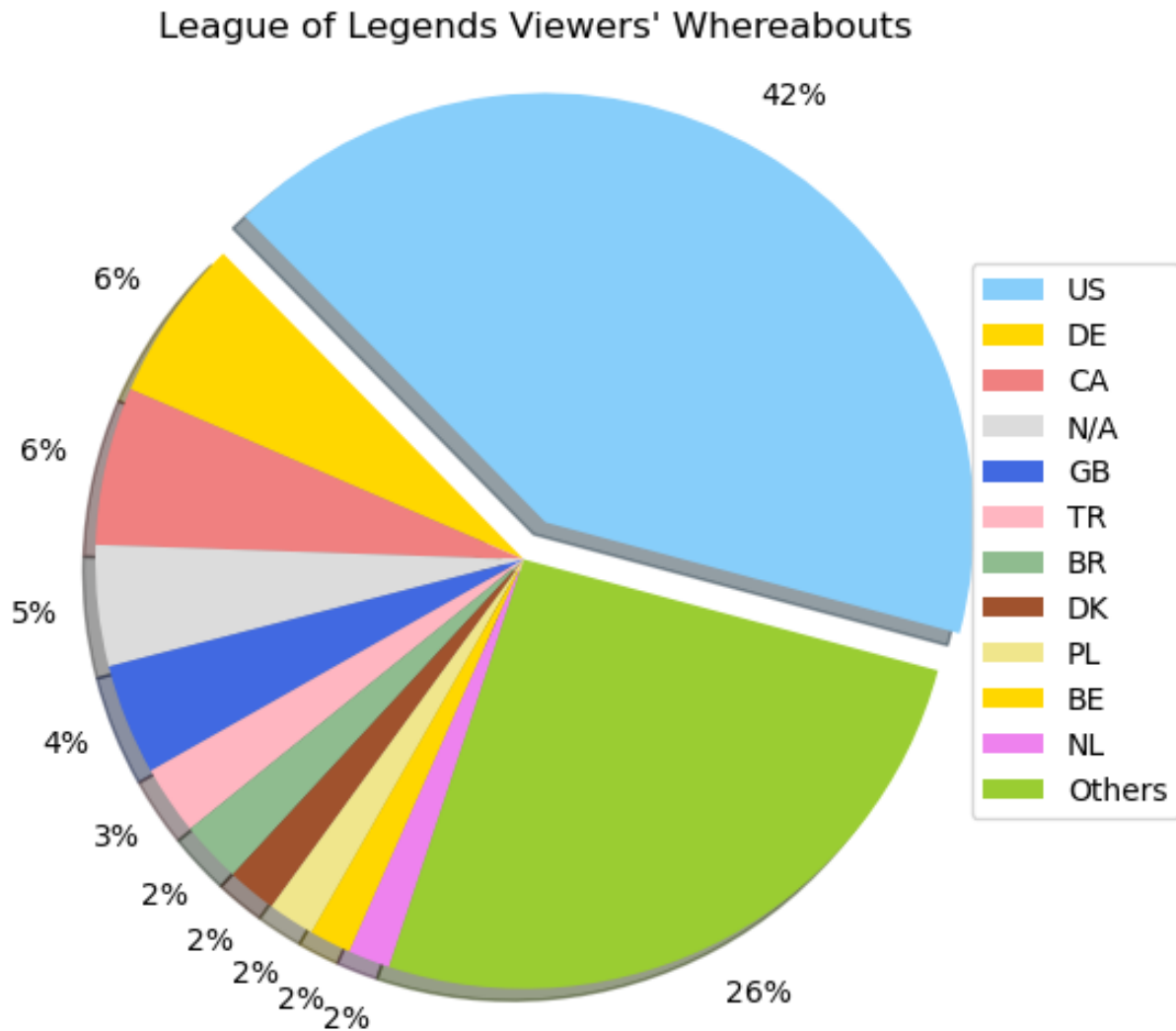Games and their viewers

3. Locatoin of LoL stream viewers

3. Where are most LoL stream viewers located?

- In the right-hand table, you can explore the geographical distribution of League of Legends (LOL) players. Countries with fewer than 10 players in the LOL game have been excluded for clarity, but you can view the complete results by executing the prompt below.

- Notably, the majority of LOL players are from the United States, surpassing the second-ranked country by a staggering sevenfold.

```
SELECT country, COUNT(*) AS 'LOL
Players'
FROM stream
WHERE  (game = 'League of Legends')
GROUP BY 1
ORDER BY 2 DESC
```

Country	LOL Players
US	447
DE	66
CA	64
NULL	49
GB	45
TR	28
BR	25
DK	20
PL	19
NL	17
BE	17
SE	16
RO	16
MX	16
PT	15
FR	15
AU	15
NO	13
IT	13
GR	10
ES	10

You can see
better view of
LOL
whereabouts
in chart

League of Legends Viewers' Whereabouts

42%

6%

6%

5%

4%

3%

2%

2%

2% 2%

26%

US
DE
CA
N/A
GB
TR
BR
DK
PL
BE
NL
Others

4. Streaming Platforms Preferences

4. What sources users watch players stream?

- The majority of users, approximately 45%, opt for the Twitch website itself as their primary streaming platform, indicating its widespread popularity.

- Following closely are smartphone users, with iPhones and Android phones securing the second and third positions, collectively accounting for about 38% of the user base.

- The dominance of the site as the preferred platform underscores its significance, overshadowing mobile devices in terms of user preference.

```
SELECT player , COUNT(*)
FROM stream
GROUP BY 1
ORDER BY 2 DESC
```

Player	Users	Percentage
site	1365	45.5
iphone_t	622	20.73
android	547	18.23
ipad_t	290	9.66
embed	125	4.16
xbox_one	22	0.73
home	16	0.53
amazon	6	0.2
frontpage	4	0.13
xbox360	1	0.03
roku	1	0.03
chromecast	1	0.03

5. Games and their genres

5. Categorization of Games into Genres?

- Adjacent to this information, the genres of the games are displayed, featuring Multiplayer Online Battle Arena (MOBA), First Person Shooter (FPS), and Survival

```sql
WITH genre AS (
  SELECT game,
  CASE
    WHEN (game = 'League of Legends') OR
      (game = 'Dota 2') OR
      (game = 'Heroes of the Storm')
     THEN 'MOBA'
    WHEN game = 'Counter-Strike: Global Offensive'
THEN 'FPS'
    WHEN (game = 'DayZ') OR
      (game = 'ARK: Survival Evolved')
    THEN 'survival'
    ELSE 'Other'
    END AS 'genre',
    COUNT(*)
    FROM stream
    GROUP BY 1
    ORDER BY 3 DESC)
SELECT * FROM genre
```

Campaign	Genre	Users
League of Legends	MOBA	1070
Dota 2	MOBA	472
Counter-Strike: Global Offensive	FPS	302
DayZ	survival	239
Heroes of the Storm	MOBA	210
The Binding of Isaac: Rebirth	Other	171
Gaming Talk Shows	Other	170
Hearthstone: Heroes of Warcraft	Other	90
World of Tanks	Other	86
Agar.io	Other	71
Rocket League	Other	49
SpeedRunners	Other	20
ARK: Survival Evolved	survival	19
NULL	Other	15
Other games	Other	16

6. View Count Analysis for Each Hour

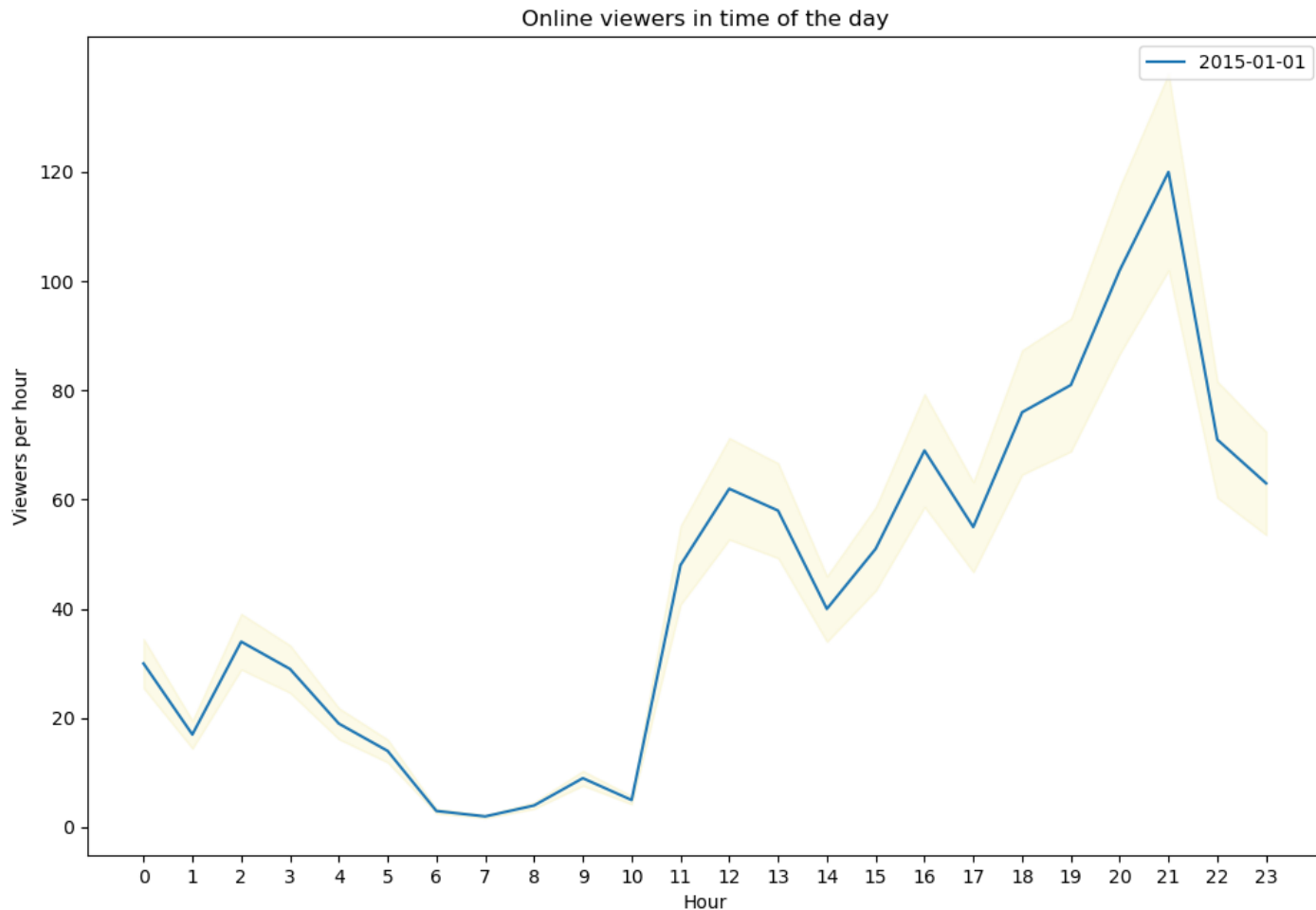# **6.** How many users view streams in each hours of day in U.S?

- Due to time differences, I focused on the United States for player and viewer data.
- The tables reveal that users predominantly watch streams between 18:00 and 22:00, with lower viewership from 5:00 to 10:00. Apart from these times, viewership remains relatively consistent throughout the day, indicating a steady presence of users tuning in to streams.

```
SELECT
    strftime('%H', time) AS 'Time',
    COUNT(*) AS 'View count '
FROM stream
WHERE country = 'US'
GROUP BY 1
ORDER BY 2 DESC
```

Time	View count
21	120
20	102
19	81
18	76
22	71
16	69
23	63
12	62
13	58
17	55
15	51
11	48

Time	View count
14	40
02	34
00	30
03	29
04	19
01	17
05	14
09	9
10	5
08	4
06	3
07	2

- There's a level of uncertainty in these numbers as some individuals leave their browsers open. To address this, we'll factor in a 15% error margin in the viewers_hour data.

- The viewership count increases from 10 AM, peaking at 9 PM before gradually declining

Online viewers in time of the day

7. Conclutions

7. Conclusions

1.League of Legends Dominance:
- League of Legends (LOL) emerges as the preferred game for players to stream on Twitch.

2.US Leads in Player Count:
- The United States boasts the highest player count among all countries, with 1062 players out of 3000, securing a substantial lead. Taiwan holds the second position with 178 users.

3.Preferred Streaming Platforms:
- The Twitch website is the most favored platform for users to watch streams, followed by mobile phones.

4.Popularity of MOBA Genre:
- Multiplayer Online Battle Arena (MOBA) captures over 50% of the overall traffic, indicating its significant popularity among both players and viewers.

5.Peak Viewing Hours:
- The peak viewing hours are concentrated between 18:00 and 22:00, with a secondary peak observed between 5:00 and 10:00. Despite lower viewership during these periods, the overall variation throughout the day is minimal, emphasizing a consistent user presence on the platform.