



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?

- We have two table on the right that shows what are the distinct games are on twitch stream and the other show the unique channels that are streaming.

```
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

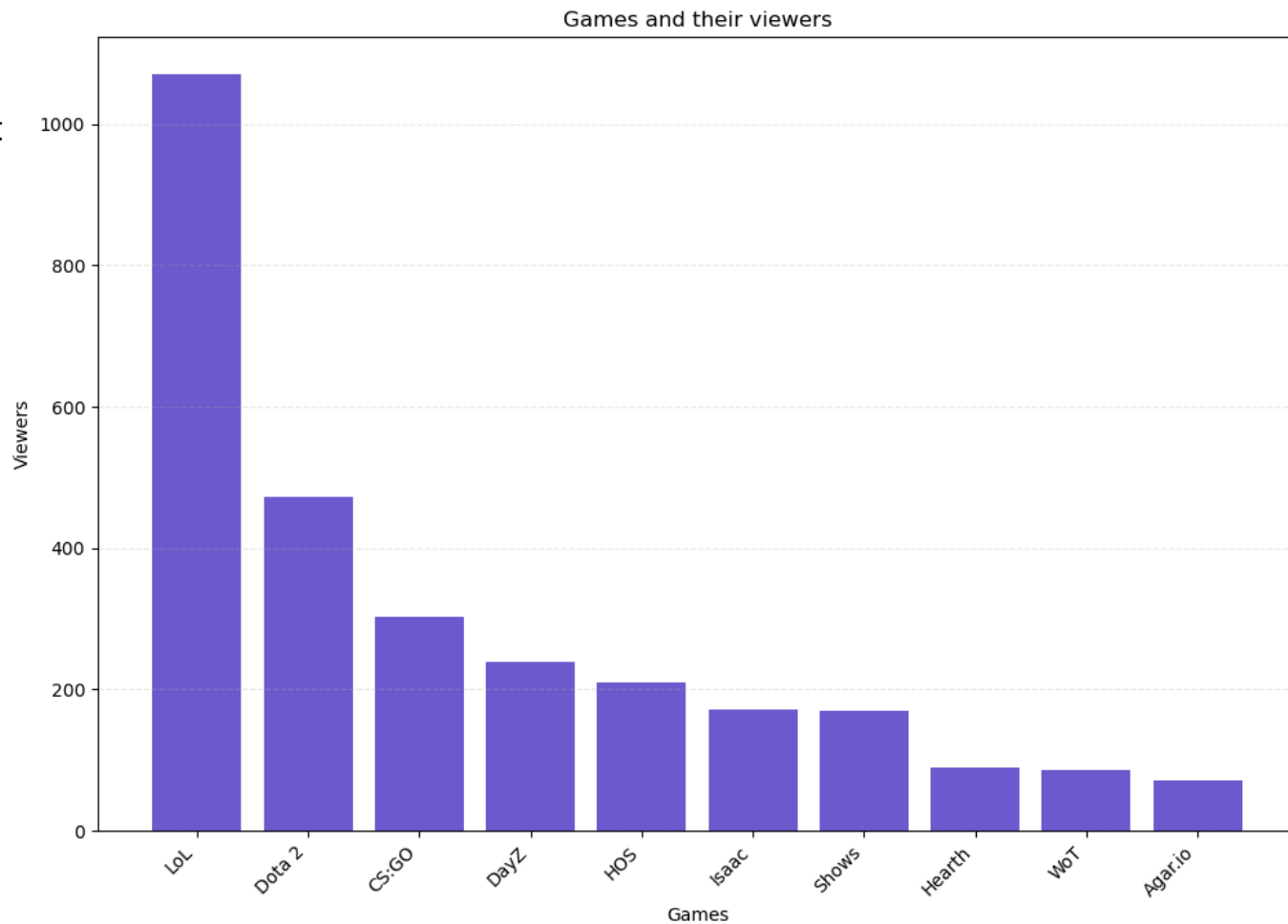
2. What are the most popular games on stream table?

- In the left table you can see how many players each game have on twitch stream.
- The most player game is League of legends known as LOL with 2 times more player on twitch than second rank.

```
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 is right-skewed so it means first four games get the most view than the rest



3. Location of LoL stream viewers

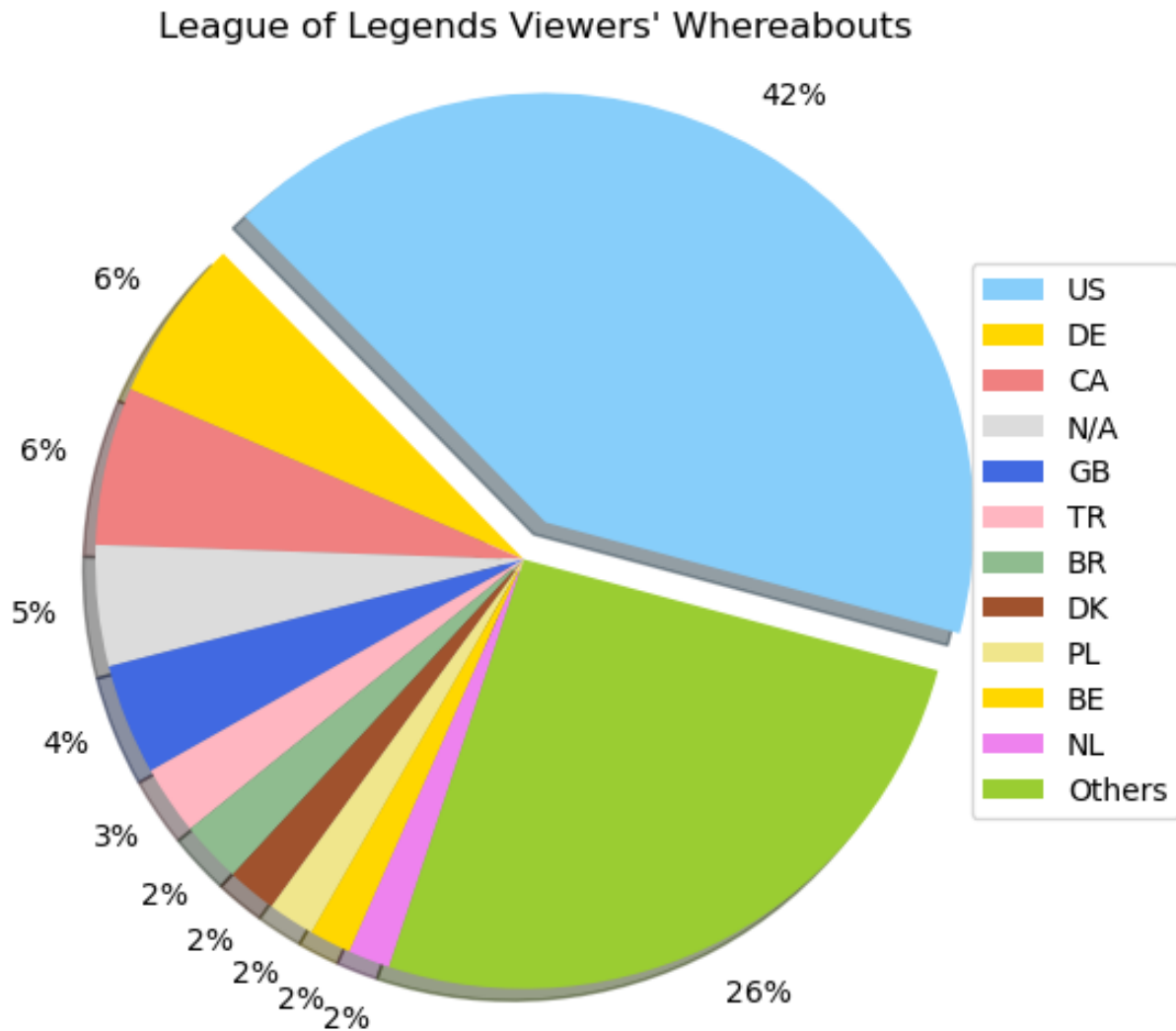
3. Where are most LoL stream viewers located?

- You can see the location of LoL players in the table on the right.
- I exclude countries that have less than 10 players on LoL game but you can see full result if you run the below prompt.
- Most players of LoL are from U.S and they are about 7 time more than second rank .

```
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



4. Sources users use to watch

4. What sources users use to watch players stream?

- Users use different platform to watch twitch streamers that shown in left table.
- Most of users use site it self and smartphones to watch streams.
- Site users have about 45 % of popularity and its most use to watch streams, iphone and android phones are 2nd and 3rd place to watch but over all of these two is about 38 % and still so lower than users who use the site to watch streams.

```
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. Specify group of the games into their genres?

- You can see the genres of games beside them.
- Multiplayer Online Battle Arena (MOBA), First Person Shooter (FPS), Survival.

```
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. Viewers in each hour

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

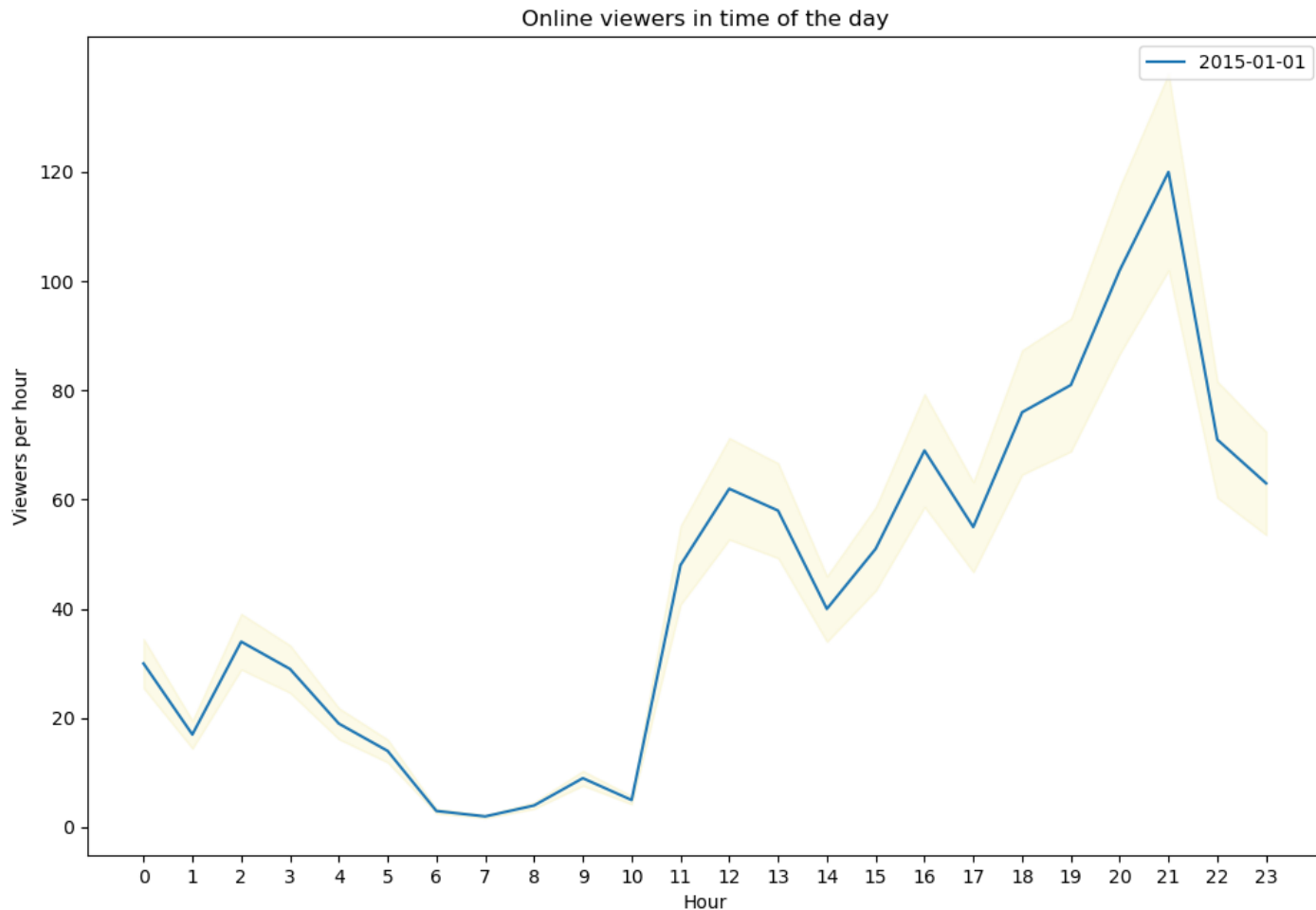
- Because of time differences I Choose US as most country that players and viewers therefore you can see which hour of the day users watch streams the most in tables.
- Users mostly watch streams from 18 – 22 and from 5 – 10 twitch have least viewers.
- Except (20 - 21) and (5 – 10) we don't have a lot of difference between viewers so most of the day people get online to see 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 is some uncertainty in these numbers because some people leave their browsers open. Let's account for a 15% error in the viewers_hour data.
- From 10 Am viewers count grows and in 21 get to the highest and then start to drop again



7. Conclutions

7. Conclusions

- League of legends known as (LOL) is the most play that players choose for stream on twitch.
- US have most players among all of the countries. It has 1062 players from 3000 players and second rank is Taiwan with 178 users.
- Most of users use site it self to watch streams so it's the most wanted source and after that they use mobile phones to watch streams.
- Multiplayer Online Battle Arena (MOBA) is really popular among player and viewers, it contain more than 50 % of traffics.
- Users mostly watch streams from 18 – 22 and from 5 – 10 twitch have least viewers but they don't have a lot of difference between viewers so most of the day people get online to see streams.