



Data analysis of Gaming data

Data analysis with SQL and Python
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Introduction

- Twitch is a leading video platform where users can watch games live or on demand.
- In this project data will be analysed from the company's stream viewing and chat data.
- The following questions will be probed:
 - The viewing figures for the top 10 featured games
 - The location of viewers of the League of Legends game
 - How the viewing figures in the UK vary over a day

Game popularity

- The number of viewers of the top 10 featured games are listed below along with their genre:

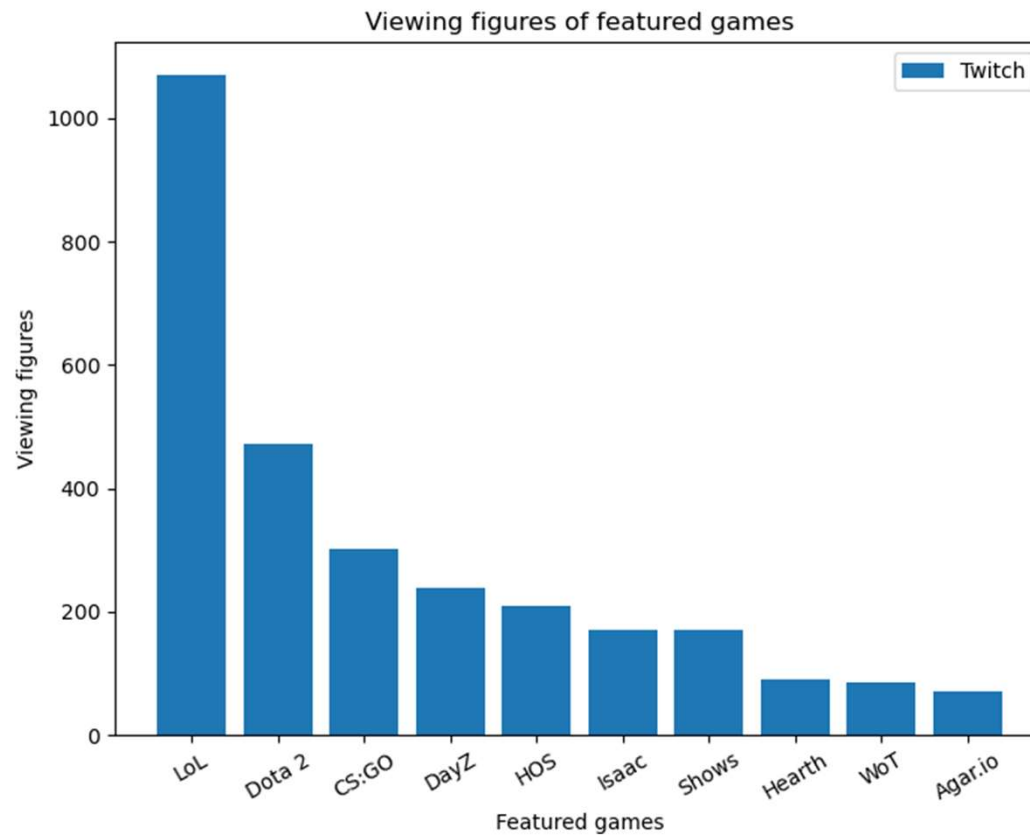
Game	Genre	Users
League of Legends	MOBA	1070
Dota 2	MOBA	472
Counter-Strike: Global Offensive	FPS	302
DayZ	Survival	239
Heroes of the Storm	Other	210
The Binding of Isaac: Rebirth	Other	171
Gaming Talk Shows	Other	170
Hearthstone: Heroes of Warcraft	Other	90
World of Tanks	Other	86
Agar.io	Other	71

SQL code

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

Game popularity

- The most popular game on the platform is League of Legends. This game has over double the number of viewers compared to any other game



Countries with League of Legend viewers

- The countries with League of Legend viewers are listed below along with the number of viewers :

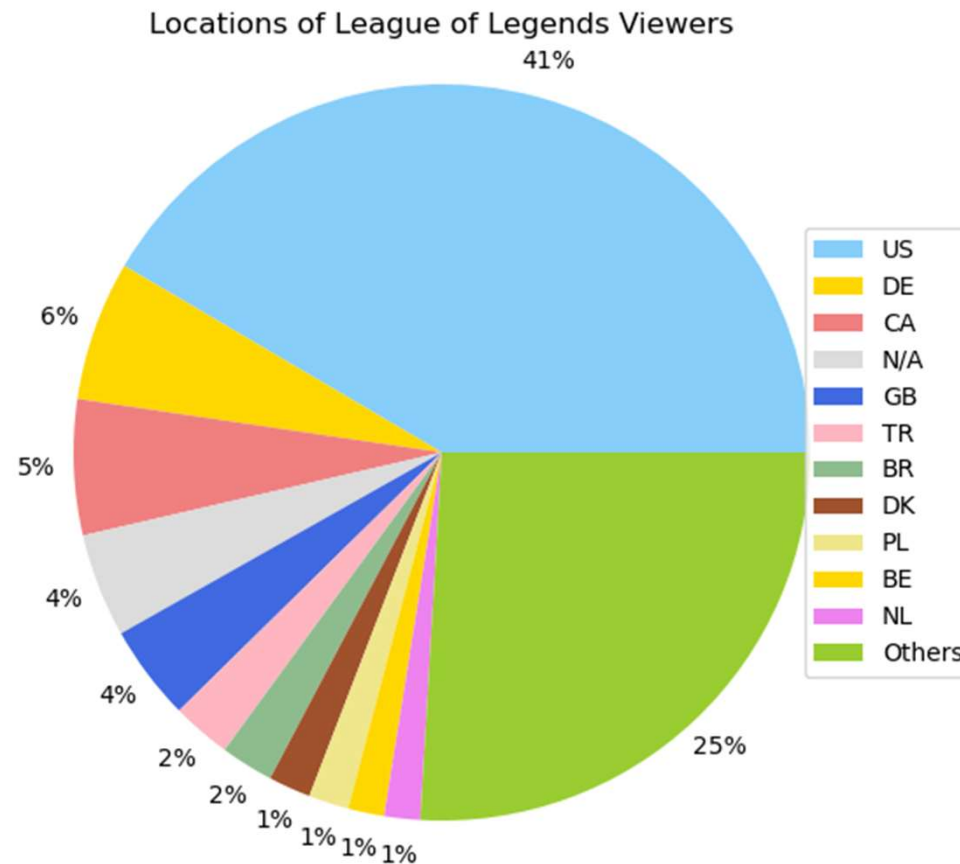
Country code	Viewers
US	447
DE	66
CA	64
N/A	49
GB	45
TR	28
BR	25
DK	20
PL	19
BE	17
NL	17
Others	279

SQL code

```
SELECT country, COUNT(time)
FROM stream
WHERE game = 'League of Legends'
GROUP BY 1
ORDER BY 2 DESC;
```

Countries with League of Legend viewers

- The majority of the viewers came from the US with 41 % of the share.
- The country with the second highest number of viewers was Germany with only 6 %



Viewing profile in the UK

- The time profile of the number of viewers on Twitch in the UK on 1st January 2015 is shown below:

Time (hour)	Viewers
00	1
01	4
02	8
03	11
04	3
05	1
06	1
08	1
09	1
10	2
11	12

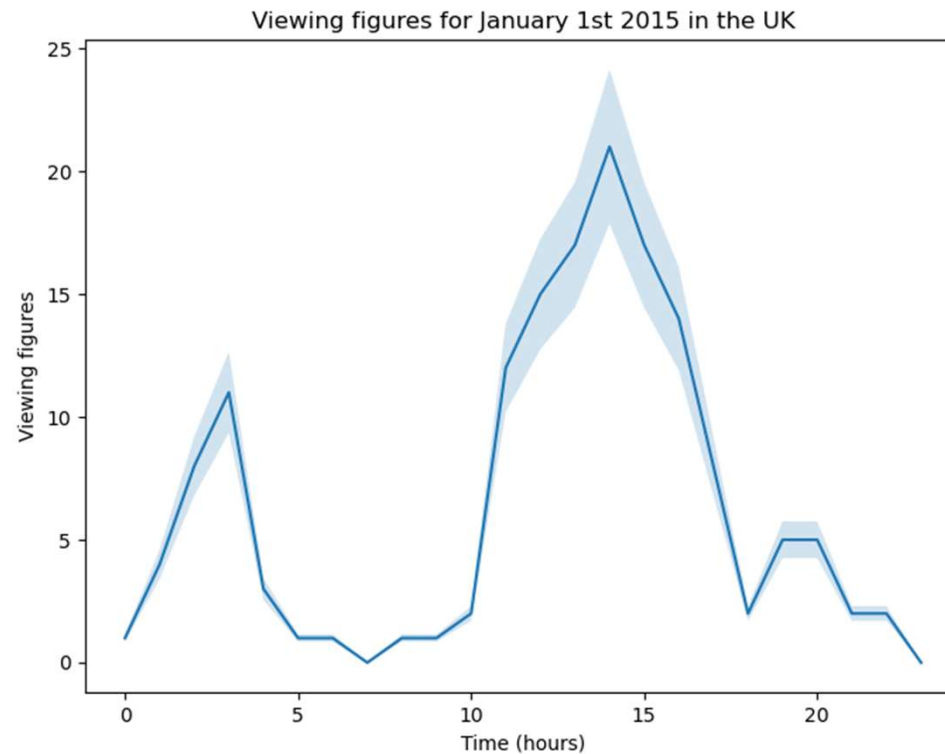
Time (hour)	Viewers
12	15
13	17
14	21
15	17
16	14
17	8
18	2
19	5
20	5
21	2
22	2

SQL code

```
SELECT strftime('%H', time), COUNT(*)  
FROM stream  
WHERE country = 'GB'  
GROUP BY 1  
ORDER BY 1;
```

Viewing profile in the UK

- A 15% margin of error has been added to the plot to account for users leaving their browsers open
- There appears to be two peaks throughout the day at 3 am and 2pm with most views occurring between 11 am and 4 pm
- This date is a bank holiday in the UK which may account for the high number of daytime viewers.



Conclusions

- League of Legends is the most popular game on the Twitch viewing platform
- 46 % of the viewers of this game came from the US with all over countries having less than 7 % of the share
- On the 1st January 2015 the most popular time for people to utilise the Twitch site was between 11 am and 4 pm, peaking at 2 pm. This is likely because the date is a bank holiday in the UK and so people are not at work during the day