



# **Students Social Media**

## **Addication**

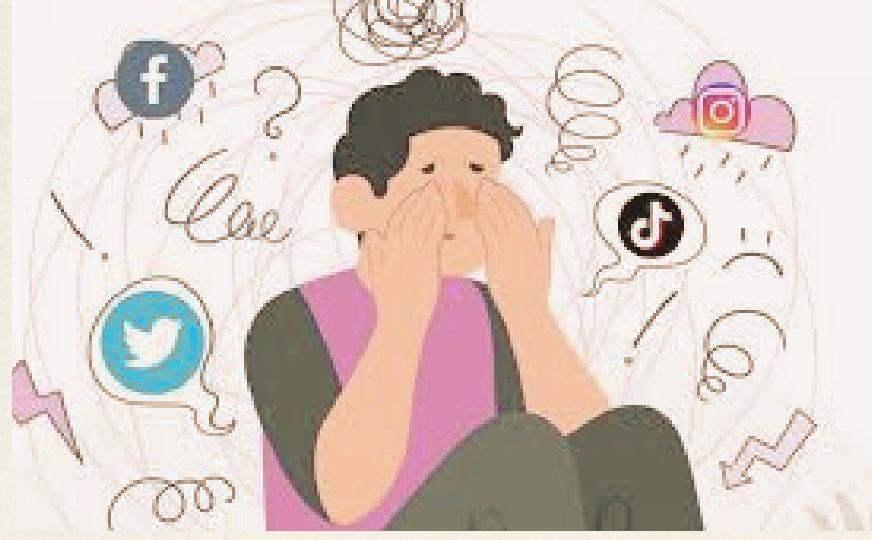
### **SQL Analysis**



# Project Overview

This project analyzes the Students' Social Media Addiction dataset using SQL.

The dataset contains anonymized survey responses from students aged 16–25 across multiple countries (e.g., India, USA, UK, Canada, etc.).

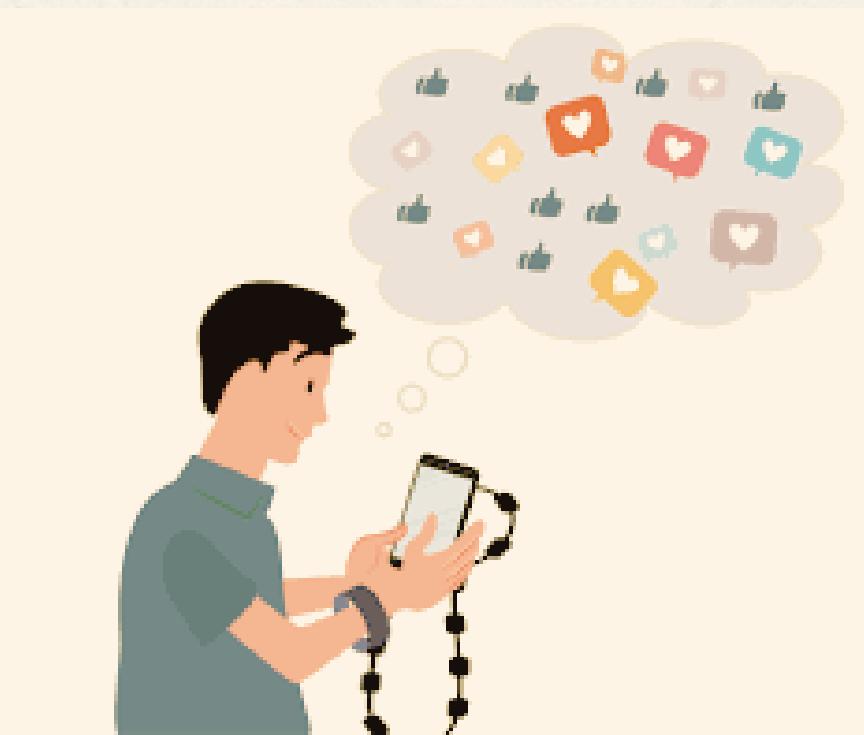


## Main Goals of the Project:

- Explore patterns in social media usage among students
- Examine the impact of social media on academics and relationships
- Perform data cleaning, transformation, and querying using SQL
- Generate insights using aggregation, window-functions , joins, and grouping techniques

## Why This Dataset?

- It offers a cross-country perspective
- Covers key behavioral dimensions like usage intensity, platform preference, and relationship dynamics
- Supports real-world data analysis and machine learning readiness



# Objectives

- To analyze how frequently students use social media across different countries
- To identify which platforms (e.g., Instagram, Facebook) are most preferred by students
- To examine the relationship between social media usage and academic performance
- To explore how social media habits affect students' relationships
- To practice and apply SQL skills on a real-world dataset
- To generate meaningful insights using SQL queries like GROUP BY, CTE, WHERE, Window-functions and AGGREGATE FUNCTIONS



# Social Media Impact Insights



## • 🎯 Usage & Behavior

- Average daily screen time overall and by gender?
- Top 3 most used platforms among students?
- Which country has the highest average usage time?
- Age-wise pattern of usage – do younger students spend more time?

## • 🧠 Mental Health

- Does high usage correlate with lower mental health scores?
- Average mental health score by country
- Top 3 platforms linked with low mental health score?



## • 🎓 Academic Impact

- How many students say social media affects their academics?
- Avg usage time for students who say "Yes" vs "No" in academic impact?
- Sleep Hours vs Usage Time correlation?

## • 💬 Relationships & Conflicts

- Which relationship status reports highest conflicts over social media?
- Does being addicted lead to more conflicts in relationships?
- Conflicts vs Addicted Score correlation



# 🎯 Usage & Behavior Analysis



- ◆ Average daily screen time overall and by gender?

*Query*

```
SELECT  
    Gender,  
    ROUND(AVG(Avg_Daily_Usage_Hours), 2) AS Avg_Usage_Hours  
FROM  
    addiction_data  
GROUP BY Gender;
```

*Output*



Gender	Avg_Usage_Hours
Female	5.01
Male	4.83



# 🎯 Usage & Behavior Analysis

◆ Top 3 most used platforms among students?



*Query*

```
SELECT Most_Used_Platform, User_Count
FROM (
    SELECT Most_Used_Platform,
           COUNT(*) AS User_Count,
           ROW_NUMBER() OVER (ORDER BY COUNT(*) DESC) AS rn
    FROM addiction_data
   GROUP BY Most_Used_Platform
) AS ranked_platforms
WHERE rn <= 3;
```

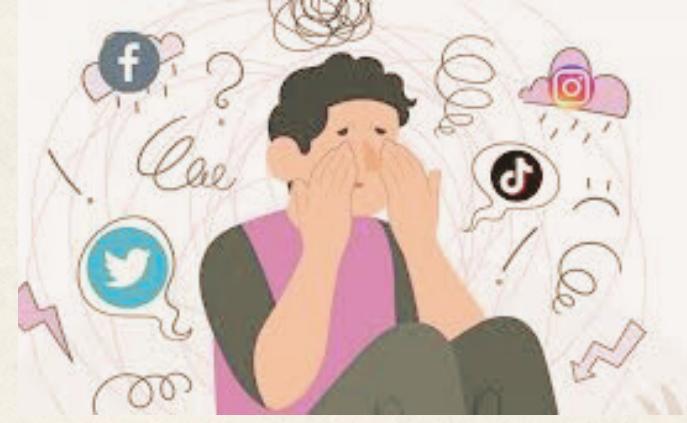
*Output*

Most_Used_Platform	User_Count
Instagram	249
TikTok	154
Facebook	123



# Usage & Behavior Analysis

Which country has the highest average usage time?



Query

```
SELECT Country, Avg_Usage
FROM (
    SELECT Country,
           ROUND(AVG(Avg_Daily_Usage_Hours), 2) AS Avg_Usage,
           ROW_NUMBER() OVER (ORDER BY AVG(Avg_Daily_Usage_Hours) DESC) AS rn
    FROM Students
   GROUP BY Country
) AS ranked
WHERE rn = 1;
```

Output

Country	Avg_Usage
USA	6.89



# 🎯 Usage & Behavior Analysis

## ◆ Age-wise pattern of usage – do younger students spend more time?



*Query*

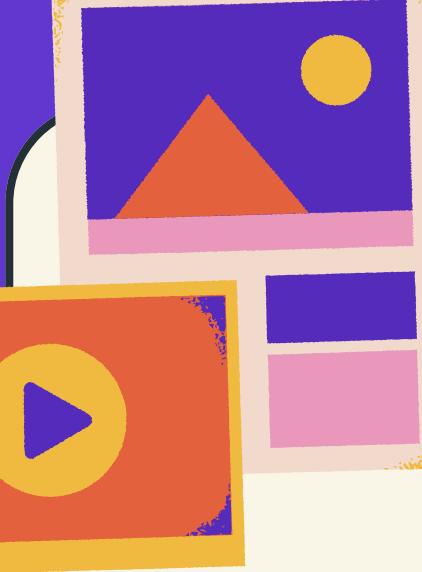
```
SELECT
CASE
    WHEN Age BETWEEN 16 AND 18 THEN '16-18'
    WHEN Age BETWEEN 19 AND 21 THEN '19-21'
    ELSE '22-25'
END AS Age_Group,
ROUND(AVG(Avg_Daily_Usage_Hours), 2) AS Avg_Usage_Hours,
COUNT(*) AS Students
FROM addiction_data
GROUP BY Age_Group
ORDER BY Age_Group desc;
```



*Output*

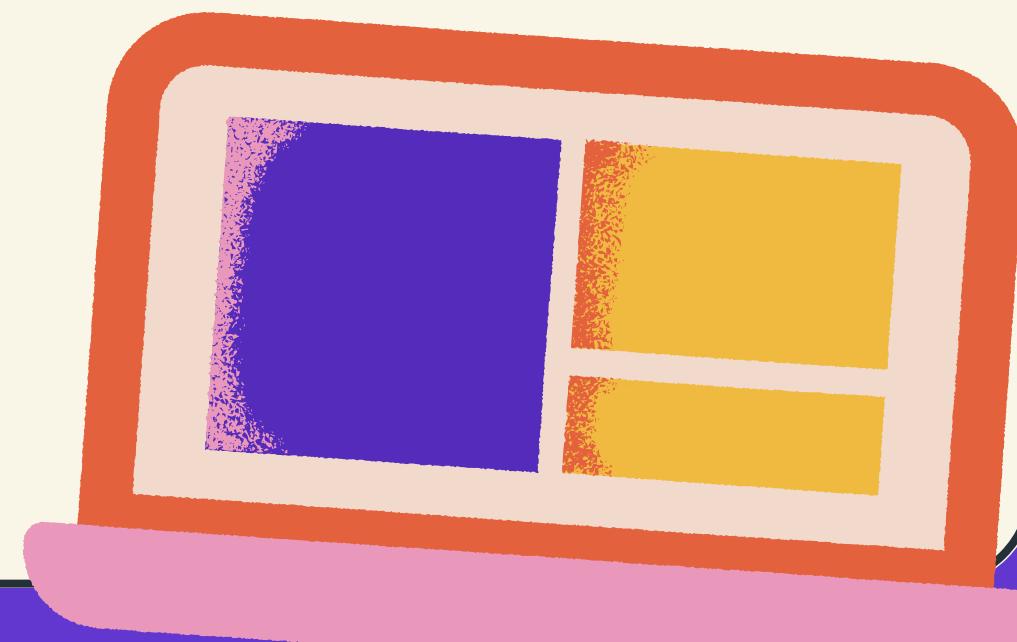
Age_Group	Avg_Usage_Hours	Students
22-25	4.7	207
19-21	5	484
16-18	5.39	14





# Key Behavioral Insights from Data

- ⌚ Females spend more time online daily than males
- 🌐 USA leads in average screen time
- 👤 Age group 19–21 is most active
- 📱 Instagram, TikTok, and Facebook are most used platforms



# Academic Impact

◆ How many students say social media affects their academics?



Query

```
SELECT  
    affects_academic_performance, COUNT(*) AS student_count  
FROM  
    addiction_data  
GROUP BY affects_academic_performance;
```

Output

affects_academic_performance	student_count
Yes	453
No	252



# ◆ Academic Impact

◆ Avg usage time for students who say "Yes" vs "No" in academic impact?



Query

```
SELECT  
    affects_academic_performance ,  
    ROUND(AVG(avg_daily_usage_hours), 2) AS avg_usage_time  
FROM  
    addiction_data  
GROUP BY  
    affects_academic_performance;
```

Output

affects_academic_performance	avg_usage_time
Yes	5.54
No	3.8





# Academic Impact

## Sleep Hours vs Usage Time correlation?

Query

```
SELECT
CASE
    WHEN avg_daily_usage_hours < 2 THEN '<2 hrs'
    WHEN avg_daily_usage_hours BETWEEN 2 AND 4 THEN '2-4 hrs'
    WHEN avg_daily_usage_hours BETWEEN 4 AND 6 THEN '4-6 hrs'
    ELSE '>6 hrs'
END AS usage_group,
ROUND(AVG(sleep_hours_per_night), 2) AS avg_sleep
FROM
    addiction_data
GROUP BY
    usage_group
ORDER BY
    usage_group;
```

Output

usage_group	avg_sleep
<2 hrs	8
>6 hrs	5.67
2-4 hrs	8.04
4-6 hrs	6.8



# Impact of Social Media on Student Lifestyle

## 🎓 Academic Performance

### Tool B

- 453 students said social media affects their academics.
- These students have higher average screen time than those who said "No".

## ⌚ Average Usage Time

- Yes: 5.54 hours/day
- No: 3.8 hours/day
- Students reporting academic impact use social media ~1.74 hrs more daily.

## 😴 Sleep vs Usage Time

- As screen time increases, average sleep hours decrease.
- Example:
- <2 hrs usage → 8.1 hrs sleep
- 6 hrs usage → 5.9 hrs sleep
- ⚡ Higher screen time = lower sleep duration (negative correlation)



# Mental Health Impact



◆ Does high usage correlate with lower mental health scores?

Query

```
SELECT
    CASE
        WHEN Avg_daily_Usage_hours <= 2 THEN 'low'
        WHEN Avg_daily_Usage_hours <= 5 THEN 'medium'
        ELSE 'high'
    END AS Usage_category,
    round(avg(mental_health_score),2) AS avg_mental_health_score,
    COUNT(*) AS student_count
FROM
    addiction_data
GROUP BY Usage_category;
```

Output

Usage_category	avg_mental_health_score	student_count
high	5.34	294
medium	6.85	409
low	8.50	2





# Mental Health Impact



## Average mental health score by country top 5

Query

```
> WITH country_avg AS (
    SELECT
        country,
        ROUND(AVG(mental_health_score), 2) AS avg_score,
        COUNT(*) AS student_count
    FROM addiction_data
    GROUP BY country
)
SELECT *
FROM country_avg |
ORDER BY avg_score DESC
LIMIT 5;
```

Output

country	avg_score	student_count
San Marino	8.00	1
Bolivia	8.00	1
Malta	8.00	1
South Africa	8.00	1
Slovakia	8.00	1





# Mental Health Impact

Top 3 platforms linked with low mental health score?



Query

```
WITH platform_avg AS (SELECT
    Most_Used_Platform, ROUND(AVG(mental_health_score), 2) AS avg_score,
    COUNT(*) AS user_count FROM addiction_data
    WHERE mental_health_score IS NOT NULL GROUP BY Most_Used_Platform
),
ranked_platforms AS (
    SELECT most_used_platform, avg_score,
    user_count, RANK() OVER (ORDER BY avg_score ASC) AS rnk
    FROM platform_avg)
SELECT *
FROM ranked_platforms
WHERE rnk <= 3;
```

Output

most_used_platform	avg_score	user_count	rnk
Snapchat	5.54	13	1
WhatsApp	5.54	54	1
TikTok	5.71	154	3





# Relationships & Conflicts



- ◆ Which relationship status reports highest conflicts over social media?

*Query*

```
SELECT  
    relationship_Status,  
    ROUND(AVG(conflicts_over_social_media), 2) avg_conflicts,  
    COUNT(*) total_people  
FROM  
    addiction_data  
WHERE  
    Conflicts_Over_Social_Media IS NOT NULL  
GROUP BY Relationship_Status  
ORDER BY avg_conflicts DESC  
LIMIT 1;
```

*Output*



relationship_Status	avg_conflicts	total_student
Complicated	3.03	32





# Relationships & Conflicts

- ◆ Does being addicted lead to more conflicts in relationships?



Query

```
SELECT  
    Addicted_Score,  
    ROUND(AVG(conflicts_over_social_media), 2) AS avg_conflict_score,  
    COUNT(*) AS people_count  
FROM addiction_data  
WHERE conflicts_over_social_media IS NOT NULL  
GROUP BY Addicted_Score  
ORDER BY Addicted_Score;
```

Output



Addicted_Score	avg_conflict_score	people_count
2	0.00	1
3	0.81	16
4	1.66	83
5	1.96	136
6	2.74	61
7	3.00	209
8	3.91	144
9	4.27	55





# Relationships & Conflicts

## Conflicts vs Addicted Score correlation



Query

```
SELECT  
    Addicted_Score,  
    ROUND(AVG(conflicts_over_social_media), 2) AS avg_conflict  
FROM  
    addiction_data  
WHERE  
    Addicted_Score IS NOT NULL  
        AND conflicts_over_social_media IS NOT NULL  
GROUP BY Addicted_Score  
ORDER BY Addicted_Score;
```

Output



Addicted_Score	avg_conflict
2	0.00
3	0.81
4	1.66
5	1.96
6	2.74
7	3.00
8	3.91
9	4.27



# Key insights Mental health & Relationships , Conflicts

## • 🧠 Mental Health

### Does high usage correlate with lower mental health scores?

- Students with low usage ( $\leq 2$  hrs) have the highest mental health score (8.50),
- While those with high usage ( $>5$  hrs) report the lowest score (5.34).
- This indicates a negative correlation between high usage and mental well-being.

### Average mental health score by country

**Insight:** The top 5 countries with the highest average mental health scores are San Marino, Bolivia, Malta, South Africa, and Slovakia, all scoring a perfect 8.00.

However, each country has only 1 respondent, so this insight may not be statistically reliable.

### Top 3 platforms linked with low mental health score?

**Insight:** Students who primarily use Snapchat, WhatsApp, and TikTok have the lowest average mental health scores (between 5.54 and 5.71), suggesting these platforms may be associated with higher negative mental health impact.

## • 💬 Relationships & Conflicts

### Which relationship status reports highest conflicts over social media?

**Insight:** Students with a "Complicated" relationship status report the highest average number of conflicts (3.03) over social media, indicating a strong link between unclear relationship boundaries and online disputes.

### Does being addicted lead to more conflicts in relationships?

- **Insight:** People with low addiction scores (1–3) have conflict scores around 0.8 to 1.6.
- As the score increases to 7–9, conflict scores jump to 3.0+, reaching up to 4.27.
- This suggests that higher social media addiction may lead to more frequent or intense relationship issues.

### Conflicts vs Addicted Score correlation

- **Insight:** Individuals with lower addiction (score 2–4) face minimal conflicts (avg ~0.8–1.6).
- As addiction score rises to 6–9, average conflict score increases sharply, reaching 4.27 at the highest level.
- This trend suggests a strong positive correlation between social media addiction and relationship conflicts.



# Project Conclusion

## 🔍 Key Takeaways from the Analysis:

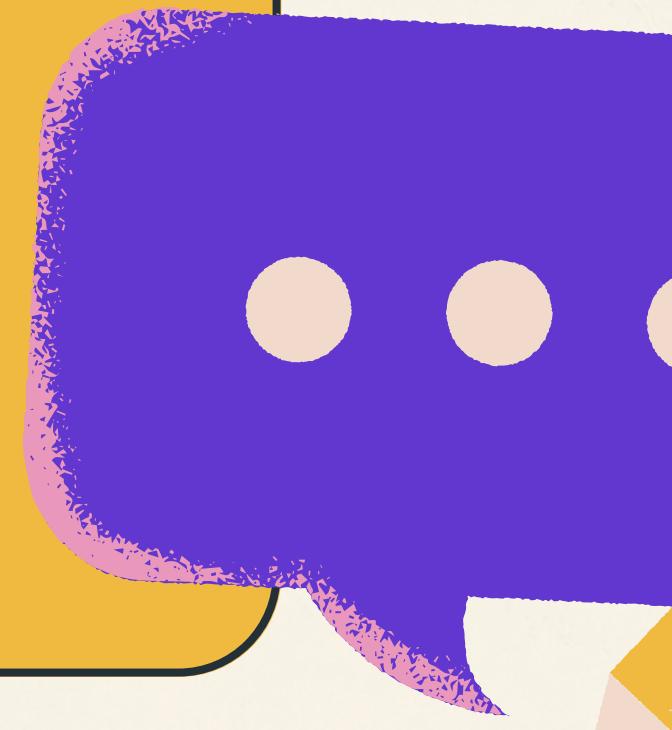
- Higher social media addiction is clearly linked with increased relationship conflicts.
- The data showed a strong positive correlation between Addicted Score and average conflict levels.
- This suggests the emotional and social cost of excessive social media use.

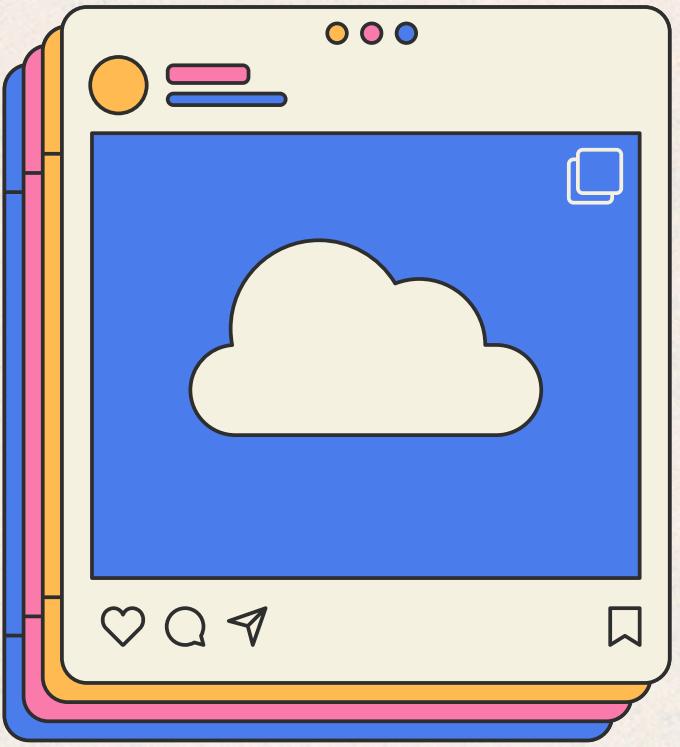
## 📌 What We Achieved:

- Designed and queried a structured SQL database.
- Extracted meaningful behavioral insights from raw data.
- Used real-world metrics to demonstrate the impact of tech addiction on relationships.

## 🧠 Final Thought:

"Social media should be a tool, not a trap. Balanced usage = Better relationships."





# Thank you!

for valuable time

