Social Media Analysis

# 📌 Project Title

Social Media Usage vs. Student Well-Being  
  
Exploratory Data Analysis (EDA) on a survey of students aged 16–25 to uncover how social media usage affects academic performance, sleep, mental health, and personal relationships.

# 🧠 Problem Statement

With rising screen time among youth, this project explores the relationship between social media usage and its impact on students' academic outcomes, mental health, sleep, and personal relationships.  
  
We aim to answer:  
- Which platforms are used most by students?  
- Is there a link between usage hours and addiction scores?  
- Do students feel their academic performance is being affected?  
- Are addicted users more likely to experience poor mental health, sleep deprivation, or social conflicts?

# 📊 Key Insights

- Instagram, TikTok, and Facebook are the most used platforms, with Instagram dominating usage in most age groups.  
- There is a positive correlation (≈0.6) between average daily usage and addicted scores.  
- Students who report that social media affects their academic performance often use platforms for 5+ hours/day.  
- Highly addicted students (Addicted\_Score ≥ 8) are more likely to report poor sleep (<6 hours) and lower mental health scores (≤ 5).  
- A clear usage pattern among addicted students: heavy TikTok/Instagram use, poor sleep, and increased interpersonal conflicts.

# 📎 Conclusion

This analysis shows that excessive social media use — particularly on TikTok and Instagram — is associated with higher addiction scores, reduced sleep, academic difficulties, and declining mental well-being.  
  
While correlation does not imply causation, the patterns suggest a strong link between high screen time and negative life outcomes among students. These findings highlight the need for digital wellness strategies and responsible social media habits, especially among youth.  
  
Future work could include predictive modeling (e.g., can usage data predict low mental health?) or building interactive dashboards using Plotly or Dash.

# 🗂️ Technologies Used

- Python (Pandas, Seaborn, Matplotlib)  
- Jupyter Notebook  
- CSV Dataset (Survey of students aged 16–25)