📊 AI ASSISTANT USAGE ANALYSIS BY STUDENTS

🗂️ DATASET OVERVIEW

I analyzed a dataset containing **10,000+ sessions** of students using an AI assistant for academic purposes. Each row in the dataset represents one session, capturing how students interacted with the AI tool across different tasks and disciplines.

📋 DATA COLUMNS

Key columns included in the dataset:

- `StudentLevel` : Whether the student is undergraduate or graduate
- `Discipline` : The academic field (e.g., Computer Science, Psychology, etc.)
- `TaskType` : Type of academic task (e.g., writing, coding, brainstorming)
- `SessionLengthMin` : Duration of the session in minutes
- `TotalPrompts` : Number of prompts exchanged with the AI
- `AI_AssistanceLevel` : How helpful the AI was rated (1–5)
- `FinalOutcome` : What was achieved during the session (e.g., idea drafted, assignment completed)
- `SatisfactionRating` : User satisfaction with the session (1–5)
- `UsedAgain` : Whether the student returned to use the tool again

🧠 SQL TECHNIQUES USED

To explore the data and extract meaningful insights, I used a variety of SQL techniques:

- `SELECT` , `WHERE` , and `DISTINCT` to explore and filter records
- `GROUP BY` with `COUNT` and `AVG` to summarize data
- `ORDER BY` to rank sessions based on satisfaction and usage
- `BETWEEN` , `TOP` , and logical conditions to focus on specific data ranges

- `Subqueries` to calculate overall percentages (e.g., assignment completion rate)

📈 INSIGHTS WE GAINED FROM THE ANALYSIS

The SQL analysis helped uncover several key findings:

- **Writing and brainstorming** were the most common task types where students used the AI.
- **Graduate students in Computer Science** showed high engagement and satisfaction levels.
- **Longer sessions (over 30 minutes)** indicated deeper academic tasks and focused usage.
- **Psychology and Business students** reported the highest average AI assistance levels.
- A significant percentage of sessions ended with **"assignment completed"**, proving the AI's usefulness.
- Students who were **dissatisfied (low rating)** and **didn't reuse** the tool revealed areas for improvement.
- A high count of students who **used the AI again** reflects a strong satisfaction and trust in the tool.
- By analyzing **average session duration** and **prompt counts**, we gained insight into typical engagement behavior.
- Sorting sessions by satisfaction helped us highlight **top-performing use cases**.
- Sessions grouped by discipline revealed which academic fields are **early adopters of AI tools**.

✅ WHAT I GAINED FROM THIS PROJECT

- Strengthened my **SQL skills** through real data exploration and problem-solving
- Learned how to apply data analysis to **understand user behavior and product performance**
- Practiced converting raw usage data into **clear, actionable insights**

- Developed the ability to communicate findings in a way that supports product improvement and decision-making