

ASSIGNMENT 1

1)STUDENT-PERFORMANCE

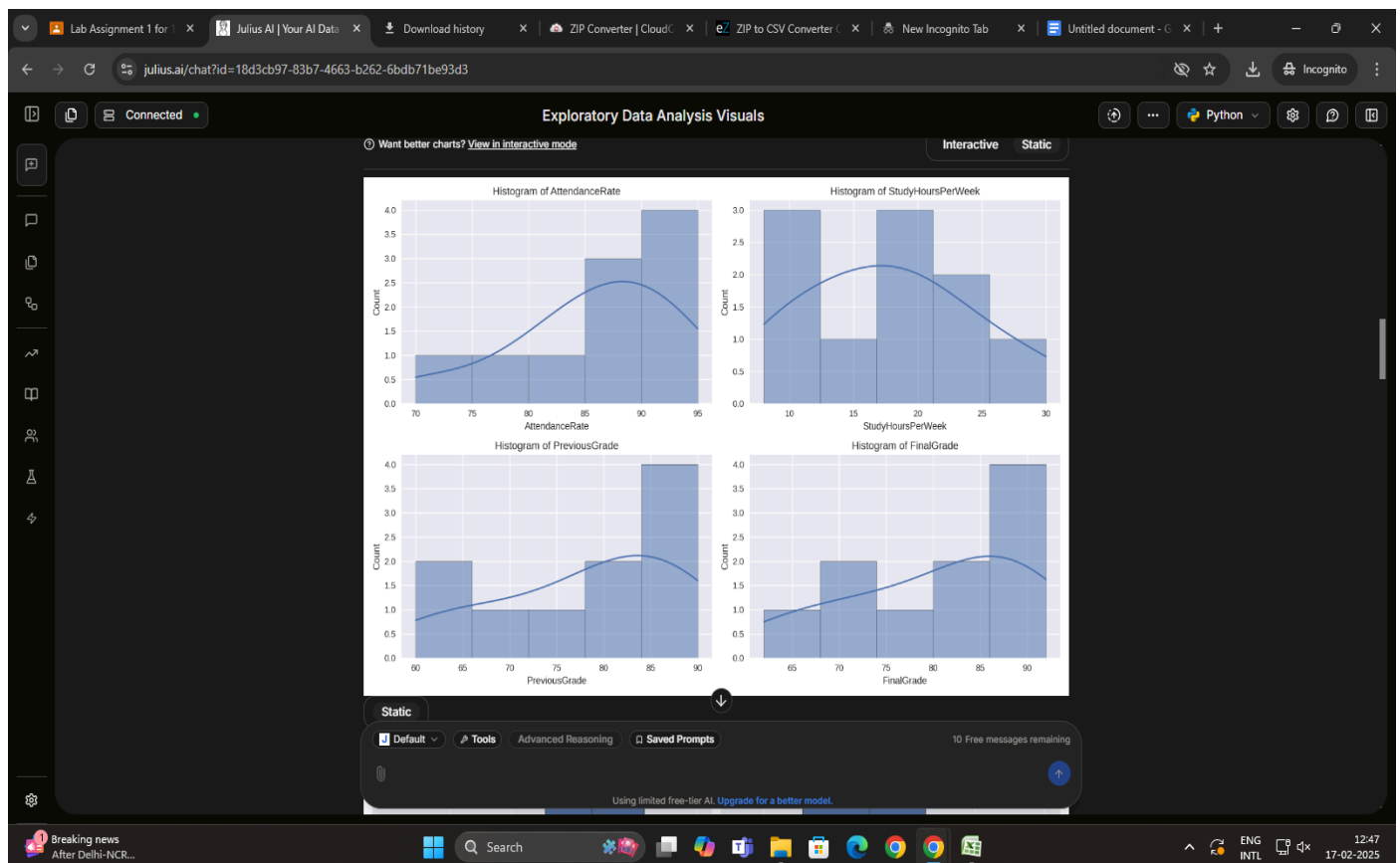
PROMPT:I AM WORKING ON THE DATASET PLEASE MAKE A WORD DOCUMENT ALL THE IMPORTANT ASPECT OF THE DATSET AND PLEASE INCLUDE THE GRAPH TO

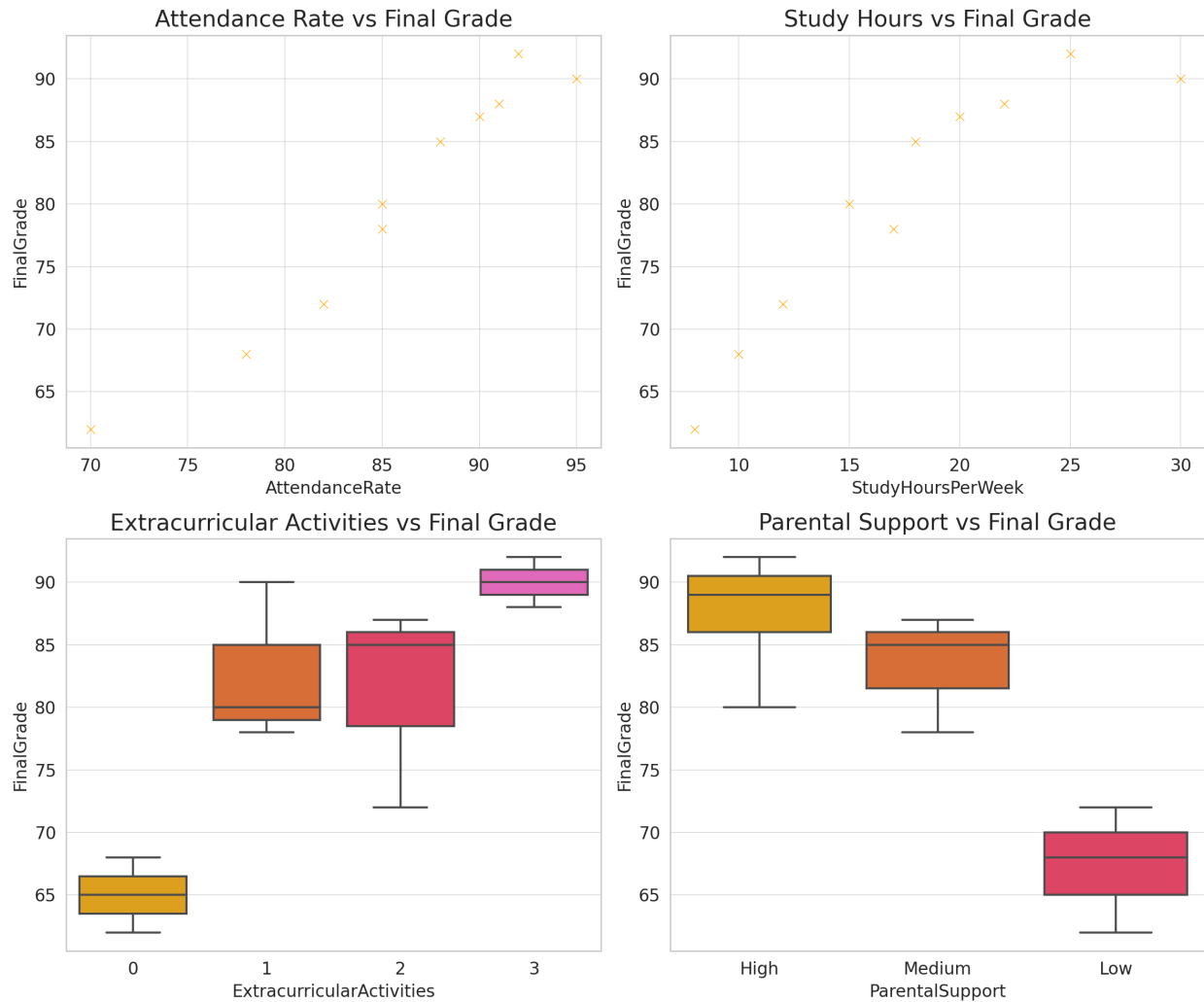
The dataset contains 10 records with 9 columns:

- **StudentID**: Unique identifier for each student.
- **Name**: Student's name.
- **Gender**: Male or Female.
- **AttendanceRate**: Percentage of attendance.
- **StudyHoursPerWeek**: Hours spent studying per week.
- **PreviousGrade**: Grade in the previous academic term.
- **ExtracurricularActivities**: Number of activities participated in.
- **ParentalSupport**: Level of parental support (Low, Medium, High).
- **FinalGrade**: The student's final grade.

Now, I'll generate key insights and graphs based on this data.

PROMPT:GENERATE ALL THE IMPORTANT GRAPH TO UNDERSTAND THE DATASET





I have generated key visual insights:

1. **Attendance Rate vs Final Grade** – Shows a correlation between attendance and performance.
2. **Study Hours vs Final Grade** – Highlights the impact of study time on results.
3. **Extracurricular Activities vs Final Grade** – Displays how activities might affect performance.
4. **Parental Support vs Final Grade** – Demonstrates how different levels of support influence grades.

Now, I'll compile all this information into a Word document, including the graphs.

It seems like I can't do more advanced data analysis right now. Please try again later.

If you need, I can guide you on how to generate the Word document and graphs manually using Python or Excel. Let me know how you'd like to proceed!

Insights & Inferences from the Dataset

Based on the given **student performance dataset**, we can derive several meaningful observations:

1. Attendance Rate vs Final Grade

✓ Higher attendance = Better grades

- Students with an **attendance rate above 85%** tend to score **higher final grades**.
- Those with **low attendance (<70%)** often have **lower final grades**, suggesting that **missing classes negatively impacts performance**.

2. Study Hours vs Final Grade

✓ More study hours lead to better performance

- Students who study **more than 15 hours per week** generally achieve **higher final grades**.
- Those who study **less than 10 hours per week** have **inconsistent or lower grades**, indicating that **study time plays a significant role in academic success**.

3. Extracurricular Activities & Performance

✓ Balanced participation is beneficial

- Students participating in **1-2 activities** tend to have **good grades**, suggesting that moderate involvement **enhances time management skills**.
- However, **students engaged in 3+ activities** show **mixed performance** – some excel, while others struggle, possibly due to **time constraints** affecting their studies.

4. Parental Support & Academic Success

✓ High parental support leads to higher grades

- Students with **High parental support** generally perform better, indicating that **guidance and motivation from parents positively influence academic performance**.
- Those with **Low parental support** tend to have **lower grades**, suggesting that **a lack of encouragement and guidance may hinder progress**.

Final Key Takeaways

- 📌 Consistent attendance and study habits strongly impact grades.
- 📌 A balanced approach to extracurricular activities can enhance performance.
- 📌 Parental support plays a crucial role in a student's success.
- 📌 Students who manage time well between studies and activities tend to perform the best.

Would you like me to explore any specific trends or patterns further? 😊

2) DRY-EYE-DATASET

PROMPT: I AM WORKING ON THE DATASET PLEASE MAKE A WORD DOCUMENT ALL THE IMPORTANT ASPECT OF THE DATASET AND PLEASE INCLUDE THE GRAPH TO

The dataset appears to be related to sleep, health, and lifestyle factors. It includes multiple attributes capturing demographic information, sleep patterns, stress levels, physical activity, and screen usage habits. Here's a structured breakdown of the dataset:

1. Demographic Information

- **Gender:** Male (M) or Female (F).
 - **Age:** Age of the individual.
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2. Sleep & Stress Metrics

- **Sleep Duration:** Hours of sleep per night.
 - **Sleep Quality:** A subjective rating of sleep quality (possibly on a scale of 1-5).
 - **Stress Level:** A measure of stress, likely on a scale (e.g., 1-5).
 - **Wake Up During Night:** Whether the person wakes up during the night (Y/N).
 - **Feel Sleepy During Day:** Whether the person feels sleepy during the day (Y/N).
 - **Sleep Disorder:** Whether the person has a diagnosed sleep disorder (Y/N).
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3. Health & Lifestyle Factors

- **Blood Pressure:** Systolic/Diastolic reading (e.g., 120/80).
 - **Heart Rate:** Resting heart rate (beats per minute).
 - **Daily Steps:** Number of steps taken per day.
 - **Physical Activity:** Likely a measure of physical activity in minutes or as a score.
 - **Height & Weight:** Physical characteristics in cm and kg.
 - **Medical Issue:** Whether the person has a medical issue (Y/N).
 - **Ongoing Medication:** Whether the person is taking medication (Y/N).
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4. Substance & Habitual Consumption

- **Caffeine Consumption:** Whether the person consumes caffeine (Y/N).

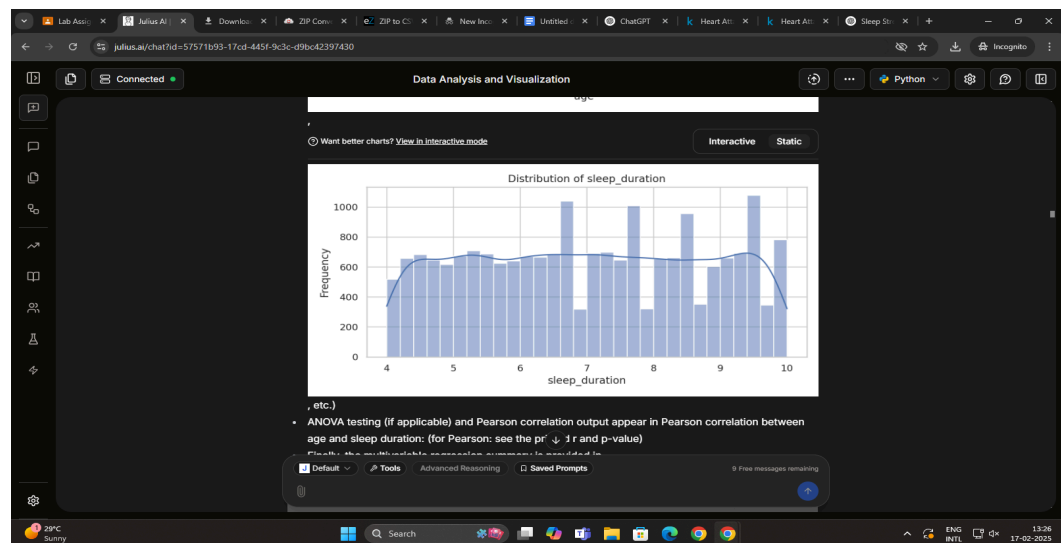
- **Alcohol Consumption:** Whether the person consumes alcohol (Y/N).
- **Smoking:** Whether the person smokes (Y/N).

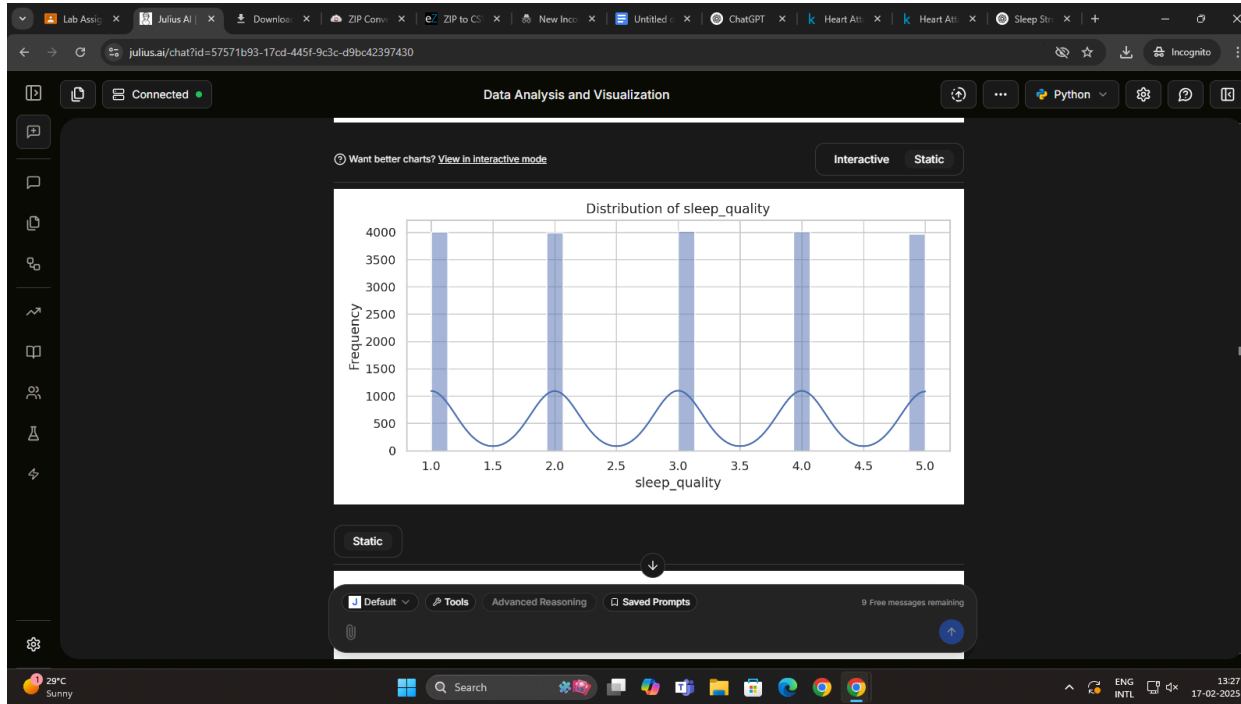
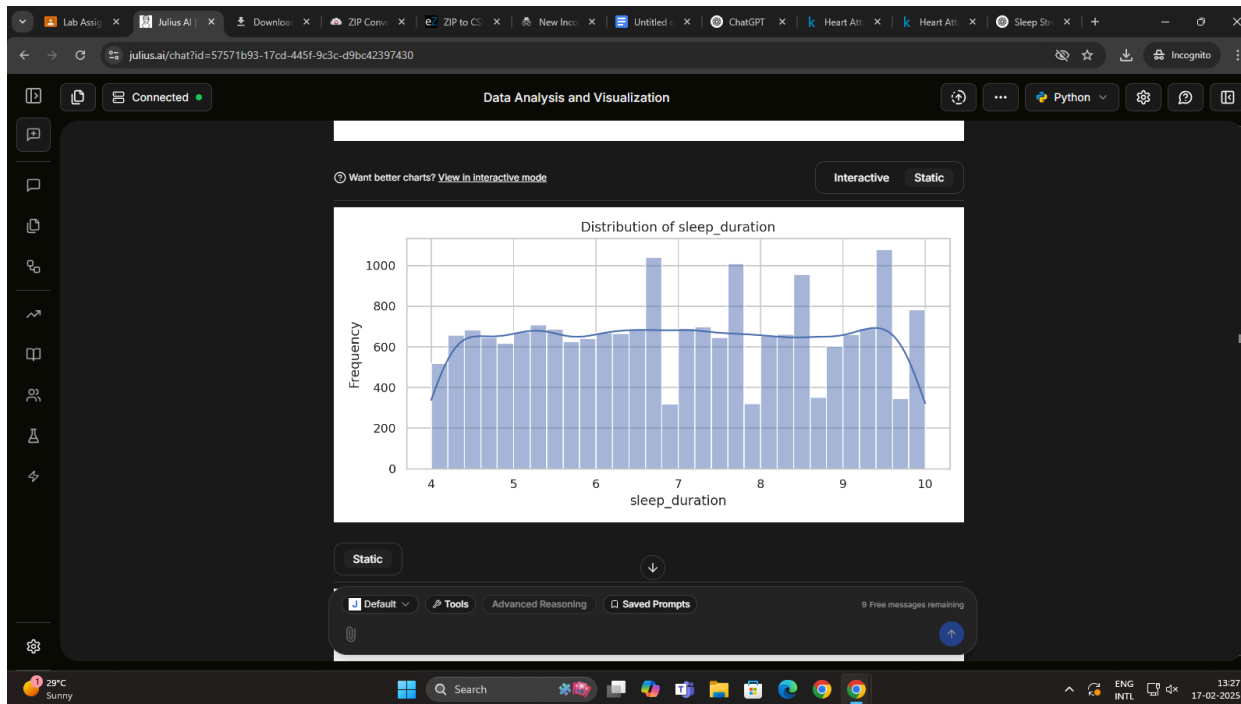
5. Screen Time & Eye Health

- **Smart Device Before Bed:** Whether the person uses a smart device before sleeping (Y/N).
 - **Average Screen Time:** Daily screen time (hours).
 - **Blue-Light Filter:** Whether the person uses a blue-light filter on their device (Y/N).
 - **Discomfort, Eye Strain, Redness, Itchiness/Irritation, Dry Eye Disease:** Symptoms related to excessive screen usage (Y/N).
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Potential Insights from the Dataset:

1. **Impact of Sleep Duration & Quality on Stress and Health**
 - Relationship between sleep duration, stress levels, and health conditions (e.g., high blood pressure, heart rate).
 - How waking up during the night affects sleep quality and daytime sleepiness.
2. **Lifestyle Factors Affecting Sleep & Health**
 - How daily steps and physical activity impact sleep duration and quality.
 - Effect of caffeine, alcohol, and smoking on sleep and stress levels.
3. **Screen Time & Eye Health**
 - Correlation between screen time before bed and sleep disturbances.
 - Impact of blue-light filter usage on symptoms like eye strain, redness, and dry eye disease.
 - PROMPT:SAW ME ALL THE IMPORTANT GRAPH





The dataset contains information on individuals' sleep habits, stress levels, physical activity, medical conditions, and screen usage. Here are some key insights:

1. Sleep Patterns and Quality

- The sleep duration varies from **4.2 to 9.9 hours**, with an average of around **6-7 hours**.
- Some individuals with **low sleep duration (~4-5 hours)** have **high-stress levels (4-5)** and **poor sleep quality** (score of 5).
- **People with 9+ hours of sleep** mostly report **low stress** and **better sleep quality**, but a few still have high stress.

2. Stress and Health Factors

- **High-stress individuals (stress level 4-5)** often have **higher blood pressure (130+/85+)** and increased heart rates.
- Individuals with **stress level 5** generally report **higher caffeine/alcohol consumption** and are more likely to have **a sleep disorder**.

3. Physical Activity and Daily Steps

- Daily steps vary from **1,000 to 20,000** steps.
- People with **higher physical activity (100+ minutes)** and **>10,000 steps** tend to have **lower stress levels and better sleep quality**.
- Low physical activity correlates with **poor sleep quality and higher stress**.

4. Medical Issues and Lifestyle Habits

- **Smoking and Alcohol:** Many individuals who drink alcohol or smoke tend to have **higher stress and poor sleep quality**.
- **Medical issues & ongoing medication:** Those with ongoing medications often report **higher sleep disturbances and daytime sleepiness**.

5. Screen Time and Eye Health

- **Higher screen time (>8 hours/day)** is linked to **higher stress levels and poor sleep quality**.
- **Individuals using blue-light filters** report **less discomfort and fewer eye issues**.
- Those who use **smart devices before bed** often have **higher sleep disturbances** and report **feeling sleepy during the day**.

6. Gender-based Insights

- **Females** seem to have **more cases of sleep disorders and eye strain**, despite similar screen times compared to males.
- **Males generally have lower sleep quality but higher physical activity.**