SUMMARY OF THE ANALYSIS

🧾 Data Analysis Summary: Children’s Screen Time Study This analysis explores patterns, habits, and health impacts of daily screen time among children using various statistical and visualization techniques in Python (Pandas, Matplotlib, Seaborn).

1.Data Cleaning & Preparation Removed NaN values and checked for duplicate entries to ensure data quality.

Converted the Health\_Impacts column from comma-separated strings into individual rows using str.split() and explode() for clearer analysis.

Created age groups (5–8, 9–12, 13–16, 17–19) using pd.cut() to simplify age-based comparisons.

2.Descriptive Statistics & Distributions Used histograms and KDE plots to analyse the distribution of the Educational to Recreational Screen Time Ratio.

Visualized average screen time by:

Age (line plot)

Age group (bar chart)

Gender (bar chart)

Urban vs Rural location (bar chart)

Boxplots were used to show screen time variation and outliers across genders.

3.Category & Count Analysis Used countplot, catplot, and value\_counts() to:

Identify the most common primary devices used.

Understand the age distribution and gender balance.

Examine how many children exceeded the recommended screen time.

4.Health Impact Analysis Exploded multi-label health issues for better granularity.

Plotted a pie chart showing the most common health impacts of screen time.

Analyzed how exceeding screen time limits correlates with reported health issues using a grouped countplot.

5.Correlation Analysis A heatmap of numeric features revealed relationships between screen time, age, and other factors.

This helped highlight which factors might influence excessive screen use or health outcomes.

✅ Conclusion The study shows a clear trend of increasing screen time with age.

* Children who exceeded the recommended limits were more likely to report health issues such as eye strain and poor sleep.
* Gender and urban/rural differences were also notable, and the use of educational vs. recreational screen time varied widely.
* The primary device used by children comes out to be is smartphone.
* The percentage of children who have exceeded the limit was 85.8% and later they faced health problems.
* The average screen time comes out to be 4.512 and the maximum screentime by a child is 13.89 which was comes out to be a female.
* The average screentime for male was 4.53 and for female it was 4.49.