

Data Analytics

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Slide:-2

- Introduction
- **Data Analytics** is the process of examining raw data to find useful insights, patterns, trends, and answers to specific questions.
- Analyzing the Student Performance based on given Data Set

Slide:3

- Objective
- Analyze factors affecting student performance.
- Predict final result based on different activity.

Slide:-4

- Dataset Description
- Dataset given by the SRK Sir.
- There are 6607 Rows and 20 Columns.
- There are some categorical and continuous types of columns.

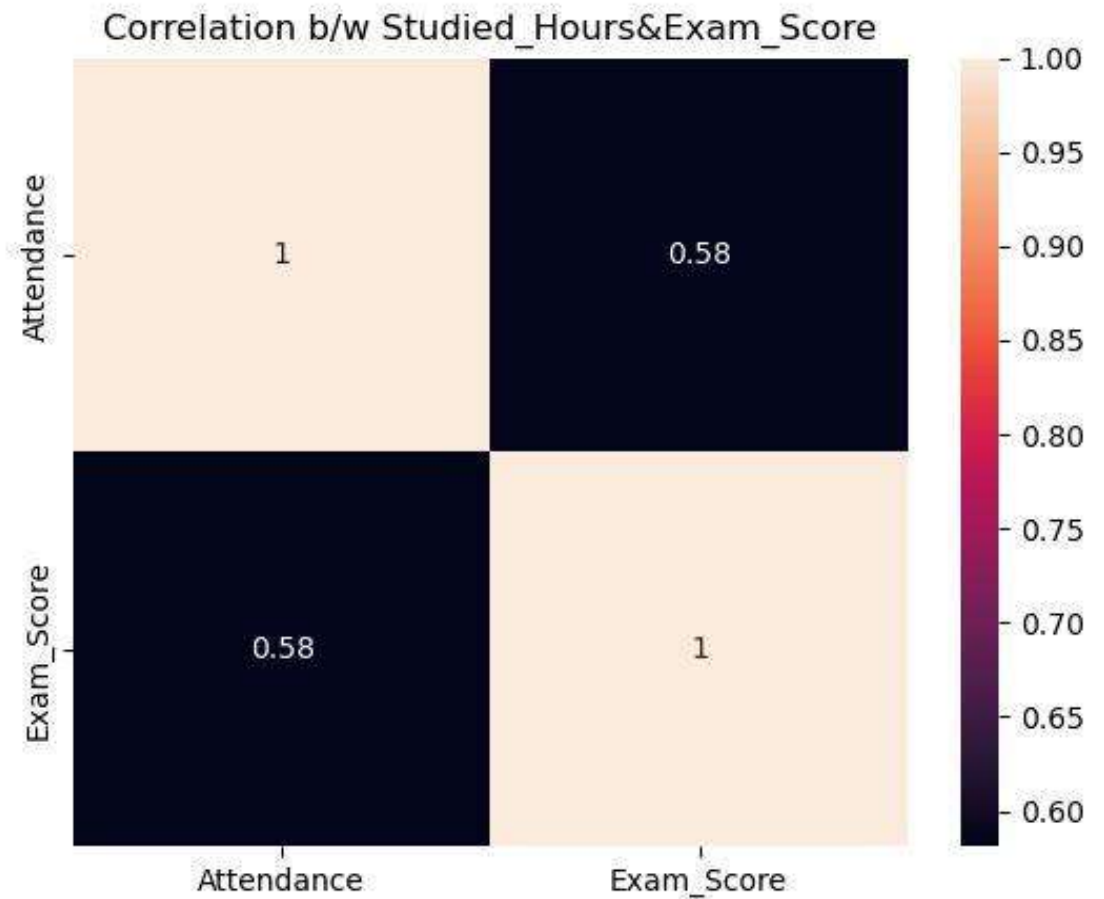
Slide:-5

- Data Preprocessing
- Data cleaning steps
- Handling missing values
- Converting categorical data
- Normalizing/standardizing data (if needed)
- Tools used: Python (Pandas , Sklearn , Numpy etc.)

Step:-6

plot:-1

- Exploratory Data Analysis (EDA)
- visualizations: by using different plot.
- Correlation heatmap.
- Studied hours less effect then attendance .
- If students will not attend the class then his score is less



Plot:-2

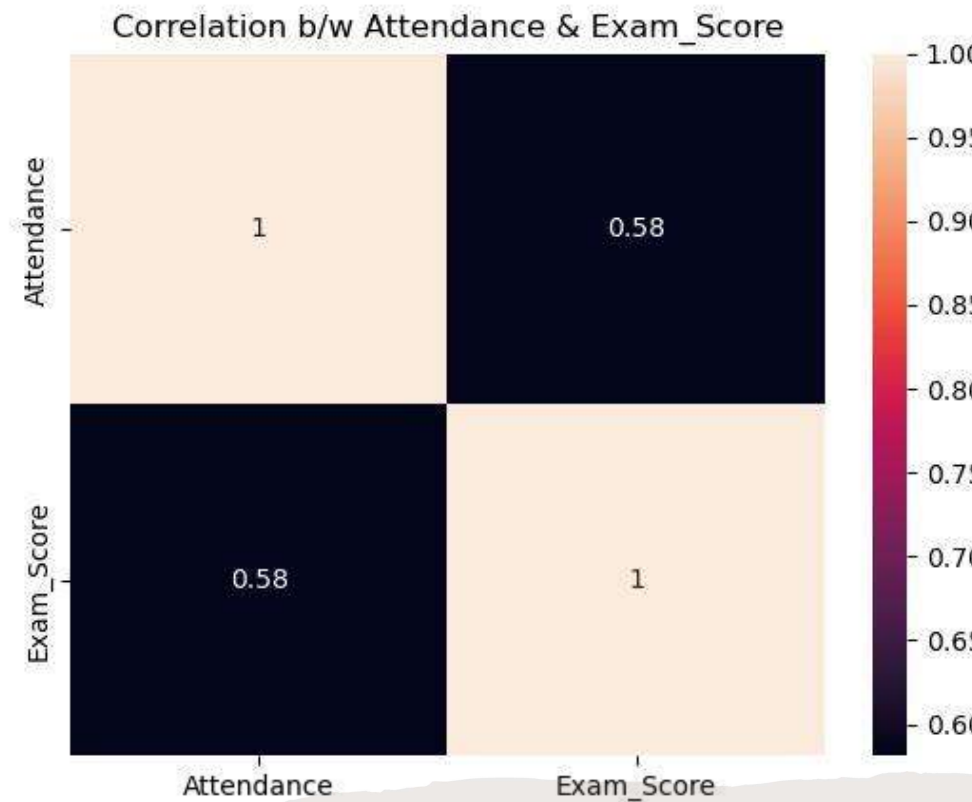
Exploratory Data Analysis (EDA).

visualizations: by using differentplot.

Correlation heatmap.

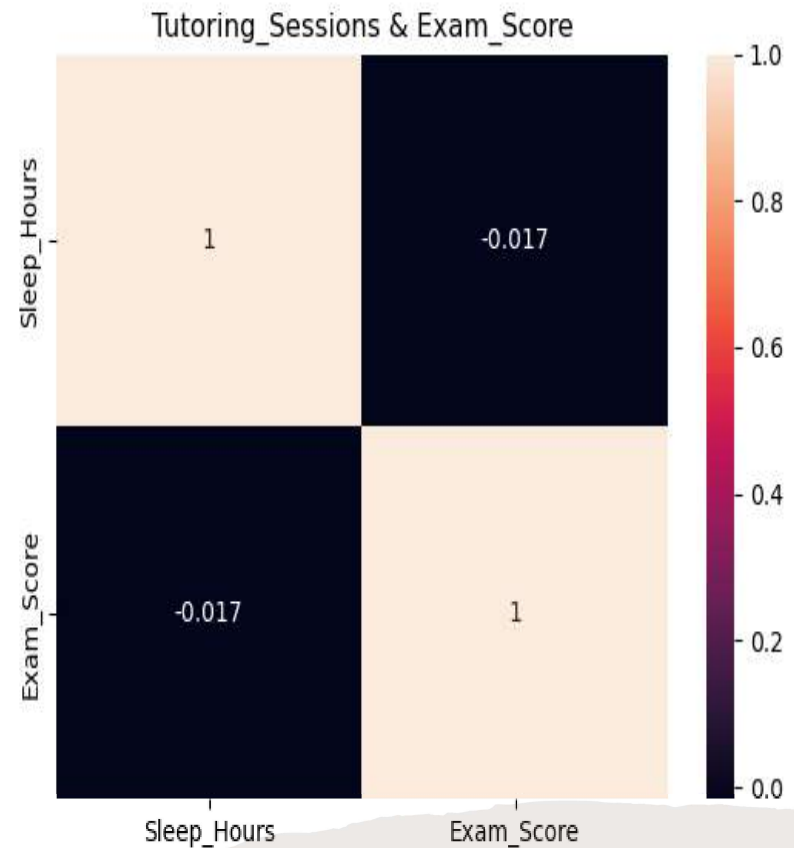
Attendance most effectthe exam score.

If students will not attend theclass then his score is less



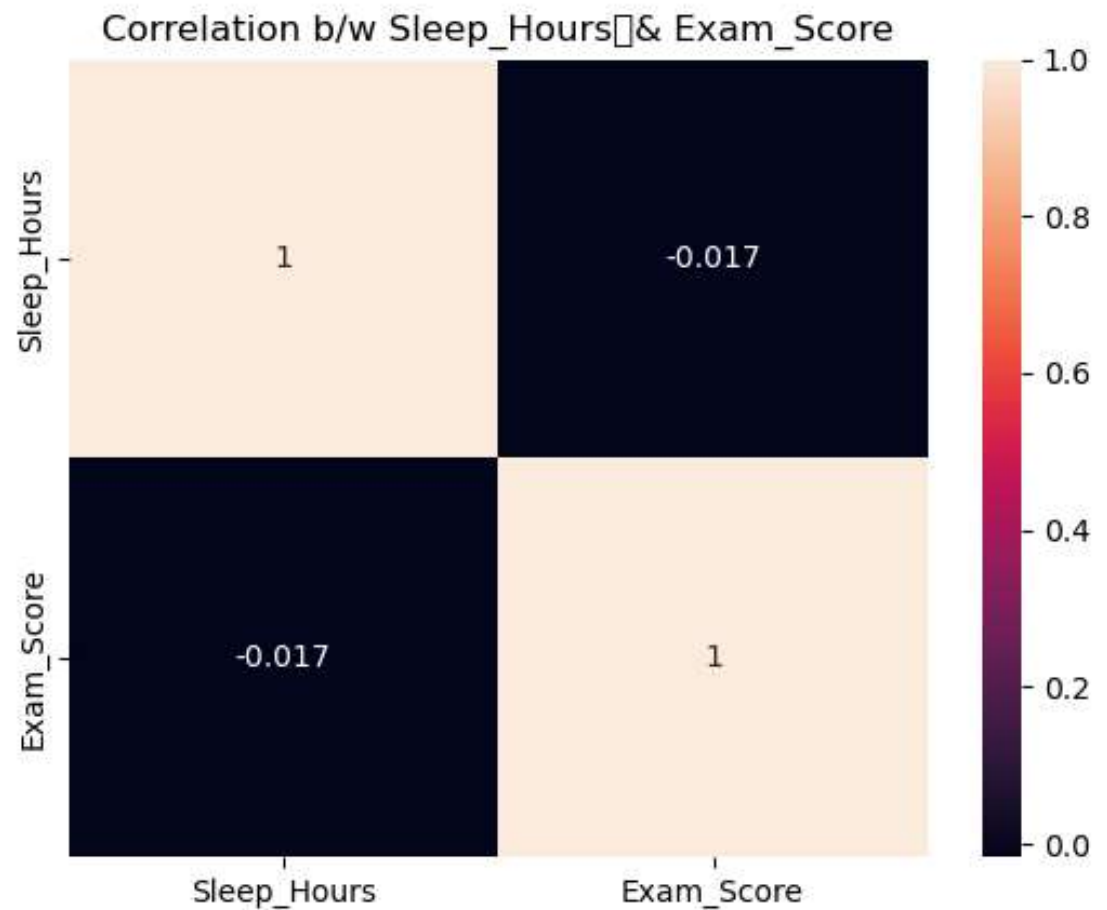
Plot:-3

- Exploratory Data Analysis (EDA)
- visualizations: by using different plot.
- Correlation heatmap.
- Tutoring Sessions minor effect the exam score.
- If students will not attend the Tutoring session
- then his score is not more effected



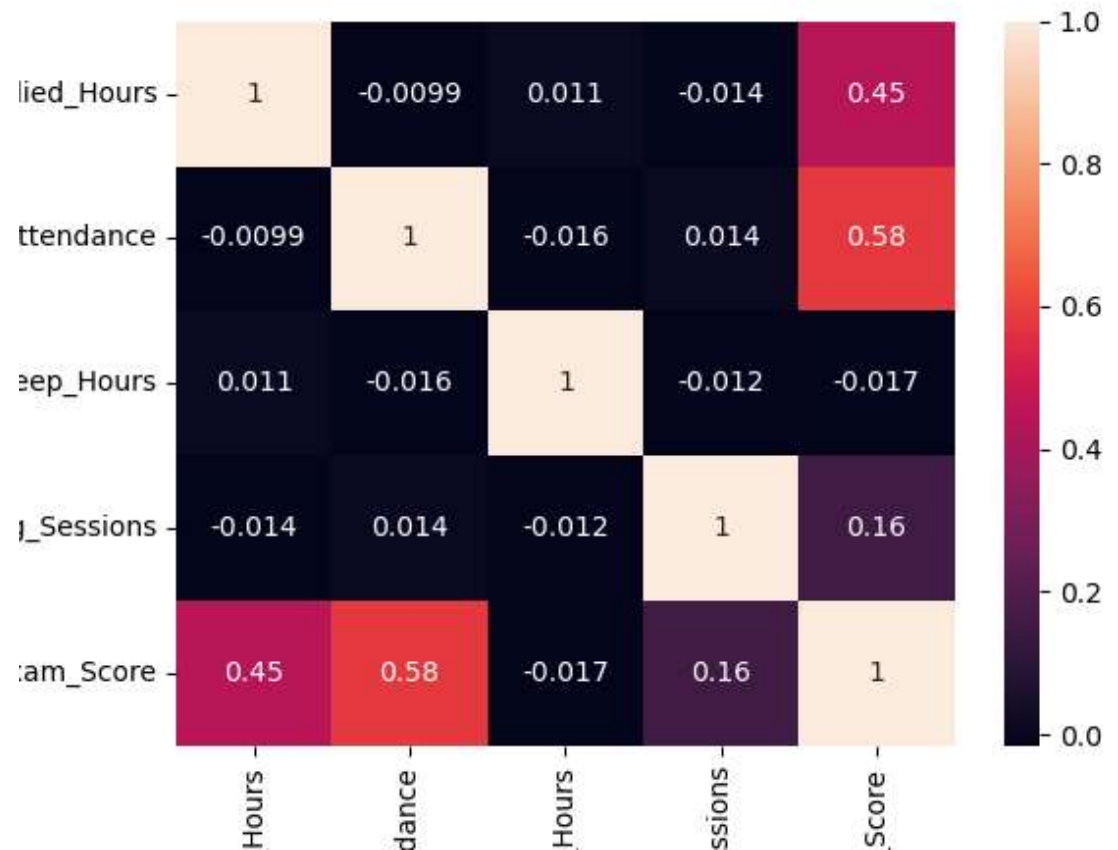
Plot :-4

- Exploratory Data Analysis (EDA)
- visualizations: by using different plot.
- Correlation heatmap.
- Sleep Hours is no effect the exam score.
- If students will more Sleep Hours the class then
- his score is less affected



Plot :-5 Final conclusion

- Exploratory Data Analysis (EDA)
- visualizations: by using different plot.
- Correlation heatmap.
- Attendance (most impactful)
- Studied Hours (less impact than Attendance).
- Less influential factors:
 - Tutoring Sessions (minor effect)
- Few significant effect:
 - Sleep Hours



Suggestion For Student

- **Avoid Excessive Absences.**
- High absence lead to poor performance—be regular in class.
- **Avoid Excessive Absences in Tutoring Sessions .**
- Regular attend the Tutoring session
- **Study Consistently, Not Just Before Exams.**
- regular study time score higher.
- Students who study too much without rest don't necessarily perform better.