**Report of Analysis of the Relationship Between Daily Entertainment Spending and Class Attendance – Dilara Uzuner**

**Introduction**

This project examines the relationship between daily entertainment spending and class attendance over a period of a semester. By analyzing personal data, it aims to uncover patterns that provide actionable insights for better financial and academic management.

**Objectives:**

* Analyze spending and attendance trends.
* Develop strategies for balancing financial and academic habits.
* Contribute to behavioral data analysis with a detailed case study.

**Data Sources**

**Entertainment Spending:**

* **Source:** Akbank's digital banking platform.
* **Details:** Daily records in Turkish Lira (₺).

**Class Attendance:**

* **Source:** Personal calendar and academic portal.
* **Details:** Daily attendance logs.

**Contextual Notes:**

* Events such as exams and holidays documented to adjust for anomalies.

**Data Analysis Overview**

1. **Data Cleaning**:
   * Missing data entries were handled.
   * Spending values normalized to avoid outliers.
2. **Exploratory Data Analysis (EDA)**:
   * Visualizations (histograms, time-series plots) helped identify key trends.
3. **Correlation Analysis**:
   * Both Pearson and Spearman correlations assessed relationships.

**Weekly Average Spending and Attendance**

* Spending and attendance trends compared on a weekly basis.
* Line graphs identified significant weekly changes.

**Spending Distribution by Situation**

* Box plots revealed variations in spending during exams, weekends, and regular days.
* Outliers and patterns highlighted behavioral differences.

**Time Series Analysis**

* Daily trends visualized to observe spending and attendance fluctuations.
* Seasonal patterns, like exam weeks and weekends, were identified.

**Correlation Analysis**

* Scatter plots with regression lines examined the relationship between spending and attendance.
* Significant correlations highlighted behavioral patterns.

**Spending Distribution (Histograms and Pie Charts)**

* Spending frequency and categorical breakdowns visualized.
* Insights into how different contexts influence financial behavior.

**Correlation Matrix**

* Heatmaps revealed strong and weak relationships between spending and attendance.

**Average Spending and Attendance**

* Averages analyzed by situation (exam days, weekends, regular days).
* Clear trends offered actionable insights for better management.

**Conclusions and Recommendations**

1. **Main Findings**:
   * Spending habits and academic attendance show significant correlations.
   * Weekends and exam days exhibit unique behavioral patterns.
2. **Personal Insights**:
   * Strategies for balancing financial and academic commitments.
3. **Future Directions**:
   * Extend analysis to longer periods.
   * Explore additional variables, like stress levels or workload.