Smartphone Usage Impact on Work Productivity

1. Project Overview

This project analyzes the impact of smartphone usage on employee work productivity using survey-based behavioral data.

The primary objective of the project is to identify how phone usage hours, sleep patterns, stress levels, and social media usage influence overall productivity performance across different demographic segments.

The dashboard provides interactive insights to help organizations understand behavioral patterns that affect employee efficiency and well-being.

2. Dataset Summary

- Dataset Name: Smartphone Usage Productivity Dataset
- Total Records: 50,000
- Data Source: Excel dataset
- Columns: Demographics, smartphone usage metrics, productivity scores, stress levels, sleep hours, and device information
- Key Features:
    - Gender
    - Age
    - Occupation
    - Device Type
    - Weekday Phone Usage (Hours)
    - Weekend Phone Usage (Hours)
    - Social Media Usage (Hours)
    - Sleep Hours
    - Stress Level
    - Work Productivity Score

3. Data Preparation – Power Query Editor

Data transformation was performed in Power BI using Power Query Editor:

- Removed errors and inconsistencies
- Corrected column names for better readability
- Detected and validated data types
- Handled data quality issues

- Ensured numeric columns were properly formatted
- Loaded cleaned dataset into Power BI Desktop for modeling

4. Data Modeling & DAX Calculations

- **Calculated Columns (DAX)**
  1. **Total Screen Time**

```
Total Screen Time = Smartphone_Usage_Productivity_Dataset_50000[Daily Phone Hours] + Smartphone_Usage_Productivity_Dataset_50000[Weekend Screen Time Hours]
```

  2. **Productivity Level**

```
Productivity level = IF(Smartphone_Usage_Productivity_Dataset_50000[Work Productivity Score] >= 7, "High", IF(Smartphone_Usage_Productivity_Dataset_50000[Work Productivity Score] >= 4, "Average", "Low"))
```

  3. **Phone Usage Level**

```
Phone Usage Level = IF(Smartphone_Usage_Productivity_Dataset_50000[Daily Phone Hours] < 3 ,"Low", IF(Smartphone_Usage_Productivity_Dataset_50000[Daily Phone Hours] <= 6, "Moderate", "Heavy"))
```

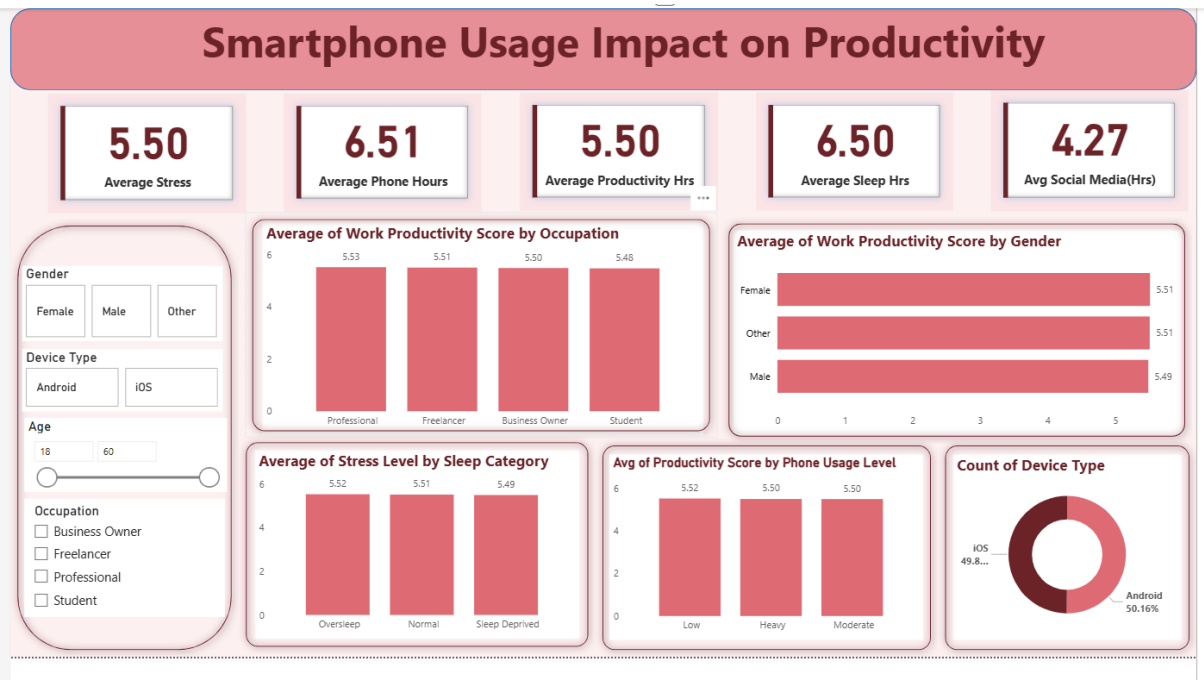
  4. **Sleep Category**

```
Sleep Category = IF(Smartphone_Usage_Productivity_Dataset_50000[Sleep Hours] < 6, "Sleep Deprived", IF(Smartphone_Usage_Productivity_Dataset_50000[Sleep Hours] <= 8, "Normal", "Oversleep"))
```

- **Measures Created**

  - Average Phone Usage Hours
  - Average Work Productivity Score
  - Average Sleep Hours
  - Average Social Media Usage Hours
  - Average Stress Level

5. Dashboard in Power BI



6. Key Insights & Analysis

- Employees with Heavy Phone Usage show comparatively lower average productivity scores.
- Sleep Deprived individuals have higher stress levels and reduced productivity.
- Moderate phone usage shows balanced productivity and stress levels.
- Certain occupations demonstrate higher resilience to phone distractions.
- Female and male productivity levels show slight variation based on usage patterns.
- High social media usage correlates with increased stress levels.

7. Business Implications

- Organizations should promote digital wellness programs.
- Encouraging healthy sleep cycles can improve productivity.
- Monitoring excessive phone usage can enhance focus and performance.
- HR departments can implement awareness sessions for work-life balance.