Overstimulation Behaviour & Lifestyle Analysis

# 1. Objective & Dataset

This project explores how behavioral and lifestyle factors influence overstimulation. Using a dataset of 2,000 records from Kaggle, we analyzed key indicators such as sleep, screen time, stress, anxiety, and physical activity to predict whether a person is overstimulated.

# 2. Phase 1: Data Exploration

The dataset had no missing values and included 19 features along with a binary target (Overstimulated). Exploratory analysis indicated that most users displayed high screen time and low sleep duration. Variables such as Anxiety Score, Depression Score, and Stress Level exhibited significant changes.

# 3. Phase 2: Statistical Analysis

Correlations were examined and ran hypothesis testing. Screen Time and Stress Level showed strong positive correlation with Overstimulated, while Sleep Hours showed a strong negative correlation. A t-test confirmed that people who are overstimulated sleep significantly less.

# 4. Phase 3: Machine Learning Modeling

Two models were trained:  
- Logistic Regression (83% accuracy)  
- Random Forest (100% accuracy)  
 The Random Forest highlighted Screen Time, Sleep Hours, and Stress Level as top predictors.

# 5. Phase 4: Insights & Recommendations

Insights:

* - High screen time, low sleep, and high stress contribute to overstimulation.  
  - Healthy habits like meditation, sleep, and physical activity will overstimulation risk.

Recommendations:

* - Limit screen time and tech use.  
  - Ensure 7–9 hours of sleep per night.  
  - Manage stress through mindfulness, breaks, and physical wellness.

# 6. Conclusion

This analysis reveals how I can use behavioural data to predict overstimulation, highlighting the importance of managing my lifestyle factors. I can apply these insights in wellness apps, HR programs, or health education to improve my overall well-being.