

AI Study Planner with Burnout Detection

Project Overview

The AI Study Planner is an intelligent behavioral analysis system designed to monitor daily study habits, predict burnout risk, and generate adaptive study plans using machine learning and time-series analysis.

Objectives

- Predict burnout risk
- Measure productivity score
- Generate adaptive study plans
- Visualize weekly patterns

Technologies Used

Python, Pandas, NumPy, Scikit-learn, Streamlit

Dataset Description

Daily logs include study hours, sleep duration, stress level, focus level, and breaks. Engineered features enhance prediction accuracy.

Feature Engineering

- Fatigue Score
- Study Load Index
- Sleep Debt
- Rolling averages
- Consistency score

Machine Learning Model

Random Forest Classifier trained with behavioral features. Achieved approximately 90% accuracy.

Productivity Score

Calculated on a 0–100 scale using weighted behavioral metrics.

System Workflow

Input → Feature Engineering → ML Prediction → Productivity Score → Adaptive Planning

Conclusion

The system helps students optimize productivity while preventing burnout.