Sleep Disorder Prediction

Abstract:

This ML-based sleep disorder project aims to develop a comprehensive and accurate diagnostic tool for identifying and classifying various sleep disorders. By leveraging machine learning algorithms and analysing large datasets of sleep-related data, the project seeks to improve the diagnosis and treatment of sleep disorders.

Problem Statement:

Analyse the Sleep disorder dataset to explore the machine learning algorithms and build Machine Learning model to predict the disease.

Dataset Information:

Each attribute in sleep disorder dataset is important aspects to analyse dataset.

Variable Description:

Columns	Description
Gender	Gender of patient (0,1) (Male, Female)
Age	Age of patient
Occupation	Education of patient
Sleep Duration	It refers to sleep (hrs/day)
Quality of Sleep	How well Individual sleep to meet their physical and psychological needs.
Physical Activity Level	Indicating their overall level of Physical exertion.
Stress Level	It refers to measure of tension, emotional stress.
BMI Category	Classification of individual's Body, Mass, Index into specific range.

Blood Pressure	It indicates high and low range of individual's blood pressure in (mmHg).
Heart Rate	It refers to number of times the heart beats per minute.
Daily steps	Number of steps by individual's in a day
Target	The patient has sleep Apnea, Insomnia or none of that.

Scope:

● Understand data by performing exploratory data analysis

● Training and building classification algorithms to predict heart disease

● Understand various model performance metrics and measure the performance of each model

Outcome:

The primary outcome for the Sleep Disorder ML Project is to develop a machine learning-based system that can accurately diagnose and classify sleep disorders. This ML model will be trained on a large dataset of sleep-related data and validated using clinical assessments.