**BrightPath**

BrightPath is an academy dedicated to supporting youth in their mental health, academic performance, stress reduction, and overall development. Our focus is on helping young individuals grow, achieve their goals, and navigate life transitions effectively. We guide them in overcoming fears and developing the skills needed to balance responsibilities, find a good job, raise a family, and still dedicate quality time to their loved ones, while maintaining good habits and a balanced lifestyle. By analyzing data on these key areas, we can identify where to focus our efforts in creating a supportive, depression-free environment that helps youth thrive, improve their grades, and lead successful lives.

In this study, we conducted a survey to understand students' lifestyles, including their habits regarding sleep, socialization, and the number of hours they spend on activities such as studying, sleeping, and engaging in physical activities like sports and gym workouts. We asked various questions to the students and analyzed their responses. A total of 2,000 students replied with their answers.

I used Jupyter Notebook to visualize the survey data, utilizing packages like pandas, seaborn, and matplotlib.pyplot to explore and clean the data. While examining this large dataset, several questions came to mind, such as: Does consistently getting less than 6 hours of sleep increase stress levels in students? How many students have a GPA lower than 2.5, and how many hours per day do they typically spend studying? What is the correlation between the frequency of social interactions, sleep hours per day, physical activity hours per day, and the high stress levels of students? The purpose of these questions is to better understand youth lifestyles, habits, and activities, and to identify areas where we can focus our efforts to help improve their physical and mental health. This will allow them to lead a healthier, depression-free, and happier life by addressing these key areas. After finding the answers to our questions, I visualized a heatmap, which reveals that High\_Stress\_Level has a negative correlation with both Sleep\_Hours\_Per\_Day and Physical\_Activity\_Hours\_Per\_Day, indicating that students who sleep more or engage in more physical activity tend to experience lower stress levels. In contrast, the correlation between High\_Stress\_Level and Social\_Hours\_Per\_Day is weak or negligible, suggesting that the frequency of social interactions does not significantly influence stress levels. Additionally, the relationships among the independent variables Social\_Hours\_Per\_Day, Sleep\_Hours\_Per\_Day, and Physical\_Activity\_Hours\_Per\_Day may show weak to moderate correlations, highlighting interdependencies between lifestyle factors, though their direct impact on stress appears limited.

This suggests that managing sleep and physical activity is more critical for reducing stress than focusing on social interaction frequency. This means that sleep and physical activity have a stronger effect on stress levels than socializing. In other words, getting enough sleep and staying active through exercise, like sports or gym workouts, are more important for reducing stress. While socializing is still important for overall well-being, it doesn’t seem to have as big an impact on stress as sleep and physical activity do. So, if students focus more on getting enough rest and exercising regularly, they are likely to feel less stressed, even if their social interactions stay the same. When students are less stressed, they can improve their grades and become more successful and happy in their lives. This suggests that managing sleep and physical activity is more critical for reducing stress than focusing on social interaction frequency.