Final Term Project Report

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Project Title: Patterns Between Sleep, Screen Time, and Stress

1. Introduction & Project Overview

This project investigates relationships between daily screen time, sleep duration, stress levels, and productivity. Consistent self-tracked data was collected throughout the term and analyzed using a D3.js-based visualization to uncover behavioral patterns.

2. Question / Hypothesis

Does increased screen time combined with reduced sleep correlate with higher stress levels and lower productivity? The hypothesis suggests that insufficient sleep and high screen usage increase stress and reduce productivity.

3. Data Collection Rationale and Process

Data was recorded once per day over multiple consecutive weeks through the end of the academic term. Variables were chosen because of their relevance to student mental well-being and daily routines. Stress and productivity were measured on a simple 1–5 subjective scale to ensure consistency.

4. Final Visualization Rationale

The final visualization format allows comparison of multiple variables within a single fixed-size view. It was selected over simpler chart types because it better communicates multi-variable relationships.

5. Conclusions Based on Data

The data shows that shorter sleep duration is strongly associated with higher stress and lower productivity. Although screen time contributes to stress, adequate sleep appears to mitigate its effects.

6. Future Data Collection Thoughts

Future data collection could include physical activity, caffeine intake, outdoor exposure, and time-of-day screen use to further refine understanding of stress and productivity patterns.

Appendix A: Complete Collected Dataset

The table below contains the complete dataset collected for this project. All recorded dates and variables are included in text format to ensure searchability, transparency, and rubric compliance, including variables that may not be directly visualized in the final chart.

Date	Screen Time (hrs)	Social Media (hrs)	School Time (hrs)	Sleep (hrs)	Stress (1–5)	Productivity (1–5)
2025-10-08	7.0	3.5	3.0	6.5	3	3
2025-10-09	8.0	4.5	2.5	6.0	4	2
2025-10-10	6.0	2.0	3.5	7.5	2	4
2025-10-11	9.2	5.0	2.5	5.5	5	1
2025-10-12	5.5	1.5	3.0	8.0	2	4
2025-10-13	4.8	1.2	3.8	8.5	1	5
2025-10-14	7.8	3.6	3.2	6.2	3	3
2025-10-15	6.5	3.0	3.0	7.0	2	3
2025-10-16	8.2	4.5	2.8	6.0	4	2
2025-10-17	5.0	1.5	3.5	8.0	2	4
2025-10-18	9.0	5.0	3.0	5.5	5	1
2025-10-19	4.8	1.2	3.5	8.5	1	5
2025-10-20	7.2	3.8	3.5	6.5	4	2
2025-10-21	5.5	1.5	4.5	8.0	2	4
2025-10-22	6.8	2.8	3.5	7.0	3	3
2025-10-23	8.5	4.2	3.0	5.8	4	2
2025-10-24	5.2	1.8	3.5	8.2	2	4
2025-10-25	7.5	3.5	3.2	6.8	3	3
2025-10-26	9.5	5.5	2.5	5.2	5	1
2025-10-27	4.5	1.0	3.8	8.8	1	5
2025-10-28	6.2	2.2	3.5	7.5	2	4
2025-10-29	8.8	4.8	3.0	5.5	4	2
2025-10-30	5.8	2.0	3.5	7.8	2	4
2025-10-31	7.2	3.2	3.5	6.5	3	3
2025-11-01	6.0	2.5	3.0	7.2	2	4
2025-11-02	9.0	5.2	2.5	5.8	5	1
2025-11-03	5.0	1.5	3.5	8.5	1	5
2025-11-04	7.8	3.8	3.0	6.2	4	2

Date	Screen Time (hrs)	Social Media (hrs)	School Time (hrs)	Sleep (hrs)	Stress (1–5)	Productivity (1–5)
2025-11-05	6.5	2.8	3.2	7.0	2	3
2025-11-06	8.2	4.2	3.0	6.0	4	2