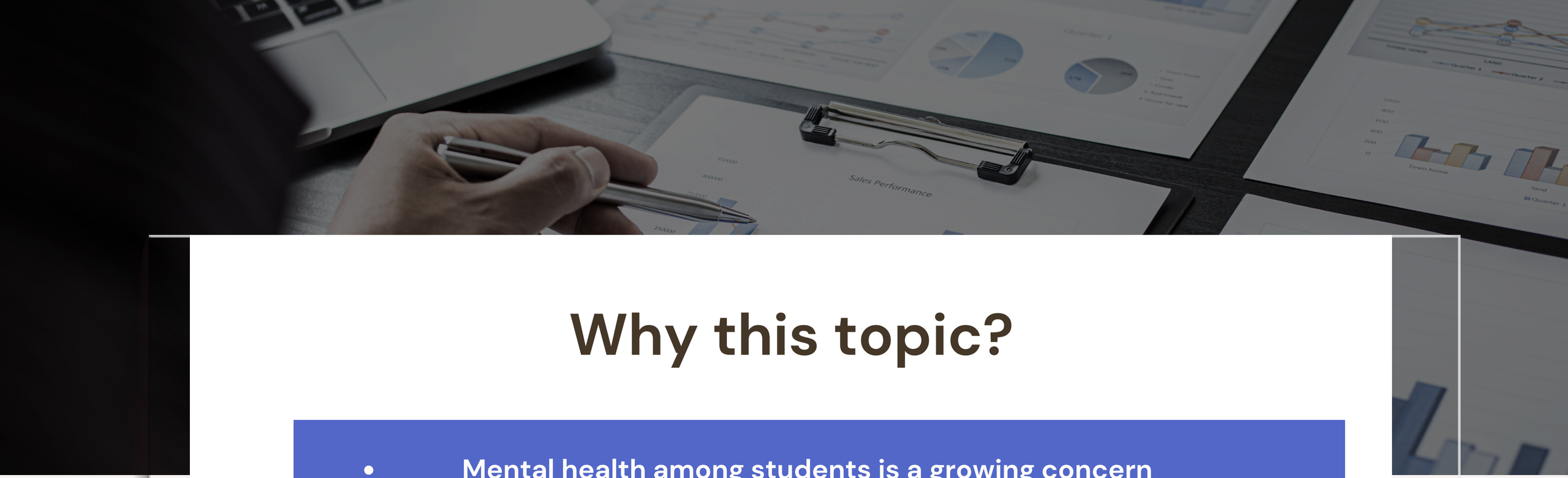
Analysis of Mental Health Factors Among University Students

Project Proposal

Team Name: Data knights

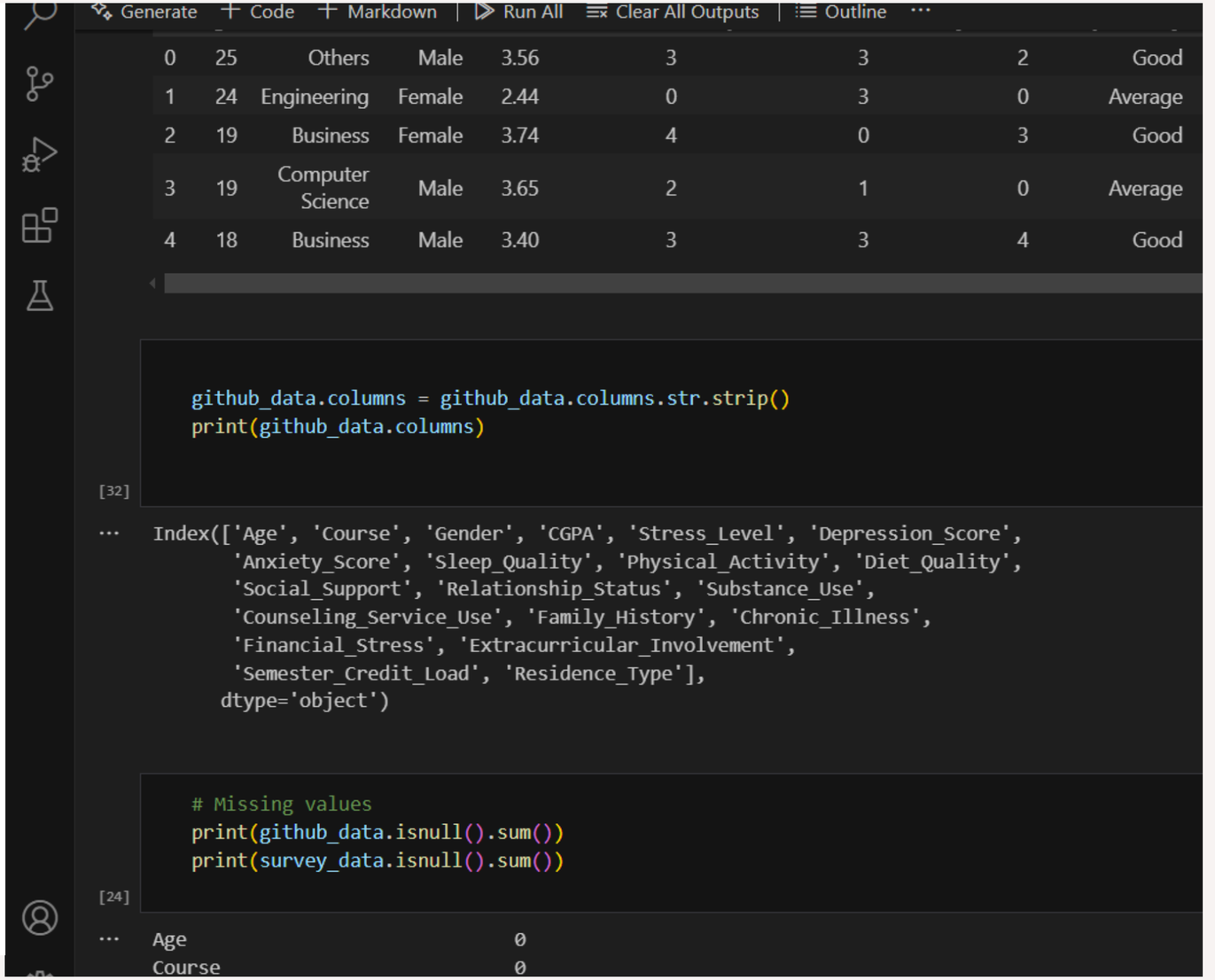


Why this topic?

- Mental health among students is a growing concern worldwide.
- Early detection and understanding of stress, sleep, screen time, and study habits can help universities implement supportive policies.
- This topic contributes to education, health, and human relations.

Dataset Overview

- Student Mental Health Assessment Dataset
- Source: GitHub
- Link: https://github.com/NidhiU-24/Student-Mental-Health-Assessment
- Rows (Students): 7,022
- Columns (Variables): 20
- Topics Covered:
  - Demographics
  - Academics
  - Mental Health Scores
  - Lifestyle Factors



Benefits of Our Dataset Analysis and Derived Insights

Improved University Support Systems

By identifying which factors (like counseling use, gender differences, and physical activity) are most linked to poor mental health, universities can tailor their support services — e.g., offering more targeted counseling or awareness programs.

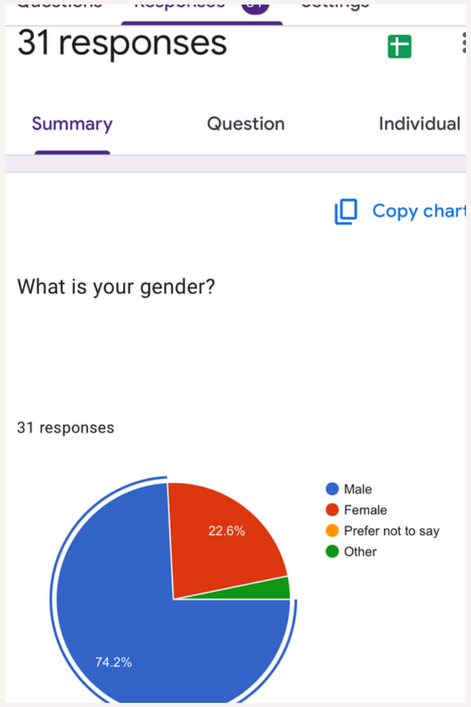
Early Intervention & Prevention

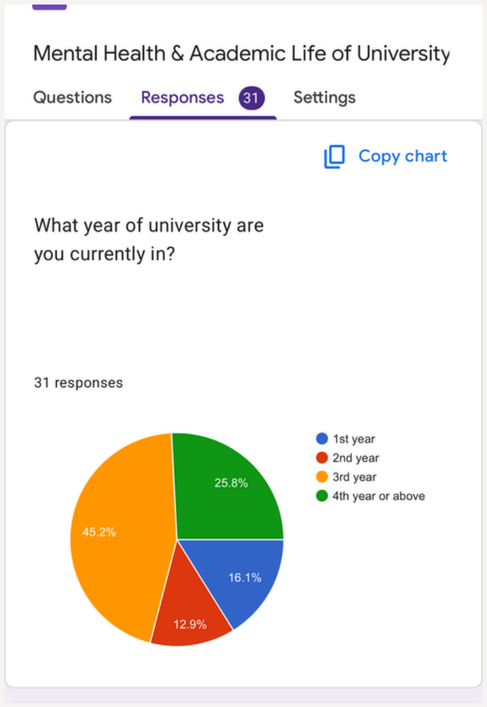
The insights can help schools identify warning patterns (like students with good grades but high stress) and intervene early, preventing more serious psychological issues down the line.

Stigma Reduction

Open analysis and discussion of student mental health helps normalize conversations about anxiety, depression, and stress — encouraging more students to seek help without shame.

Survey Overview

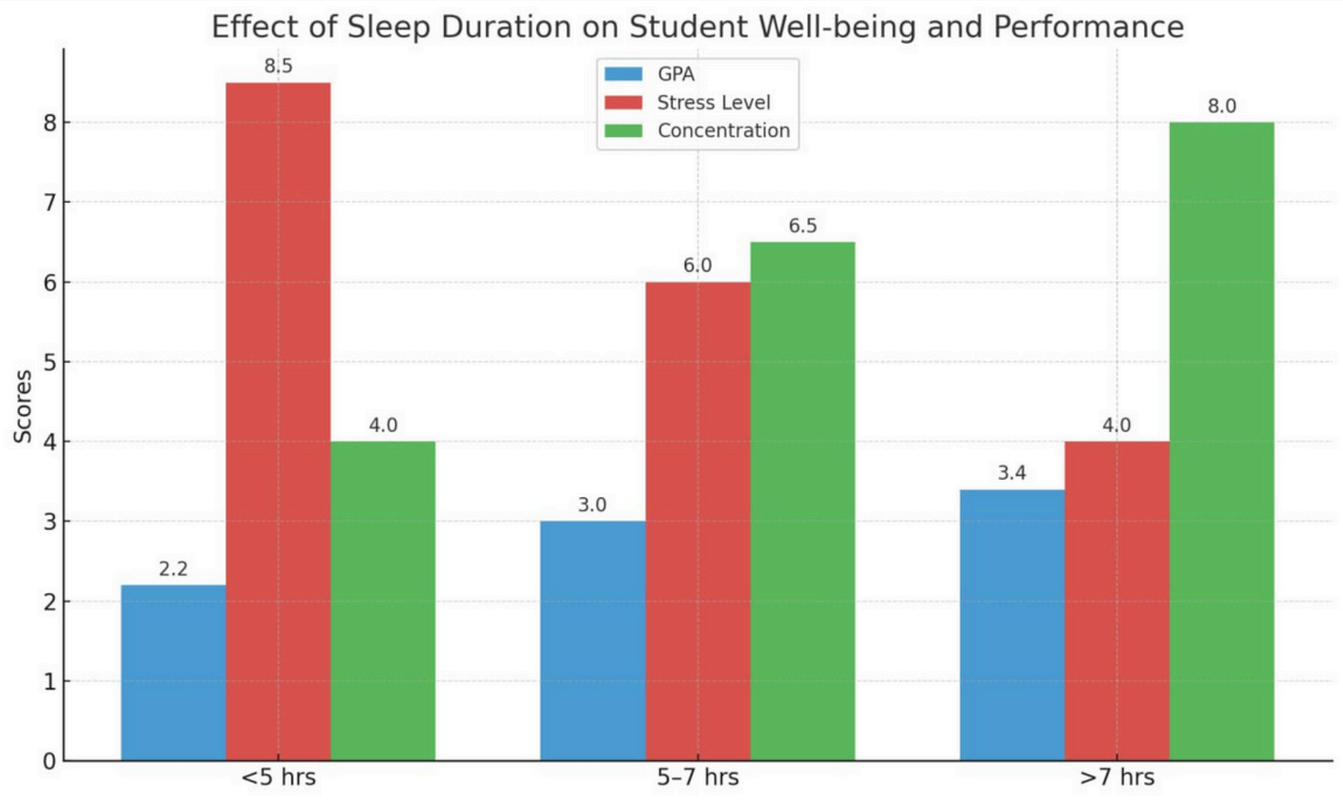




- Questions about mental health and academic life
- Number of questions: 10
- Responses: 30
- Respondents: Mostly students who are aged 20-30 years old
- Date: 5-11may, 2025
- Link: https://forms.gle/4Vn2Cm8AAyTrgHs88

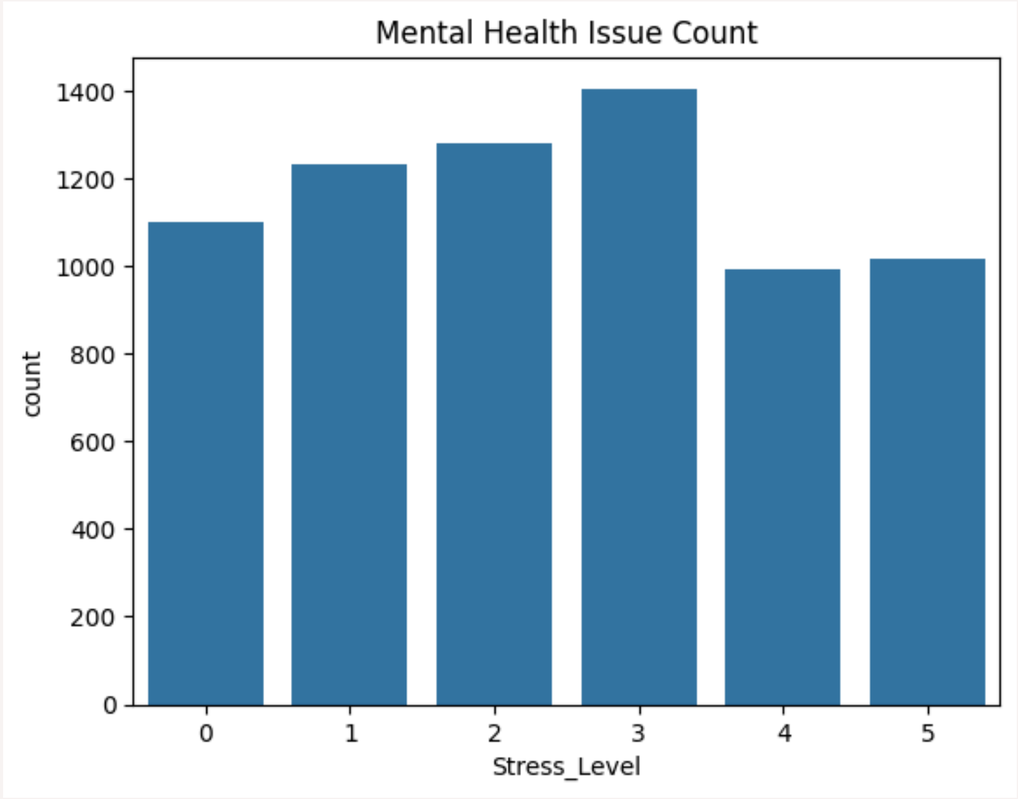
Insights from our survey & analysis of open source dataset

1. Poor Sleep Is a Strong Predictor of Academic Struggles and Low Mental Well-being



From the GitHub dataset and survey responses, a consistent pattern shows that students who sleep less than 5 hours cause to lower GPAs, higher stress and anxiety level, increased difficulty in concentration

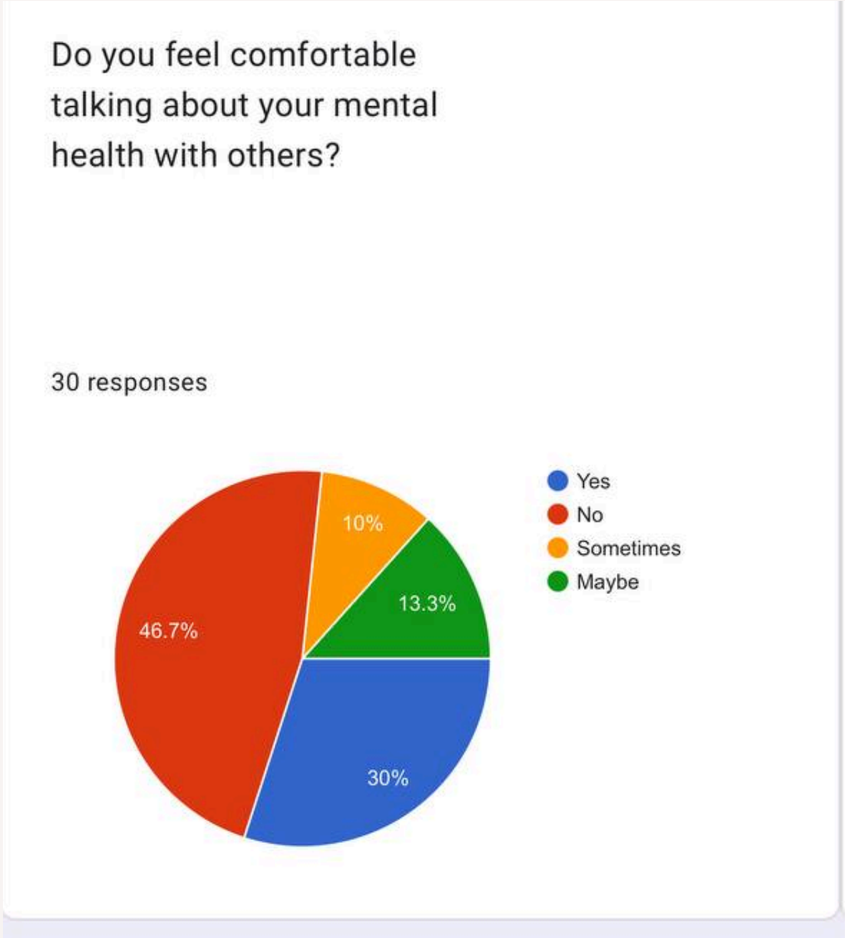
2. Academic Pressure and Lack of Social Support Are the Most Cited Stressors



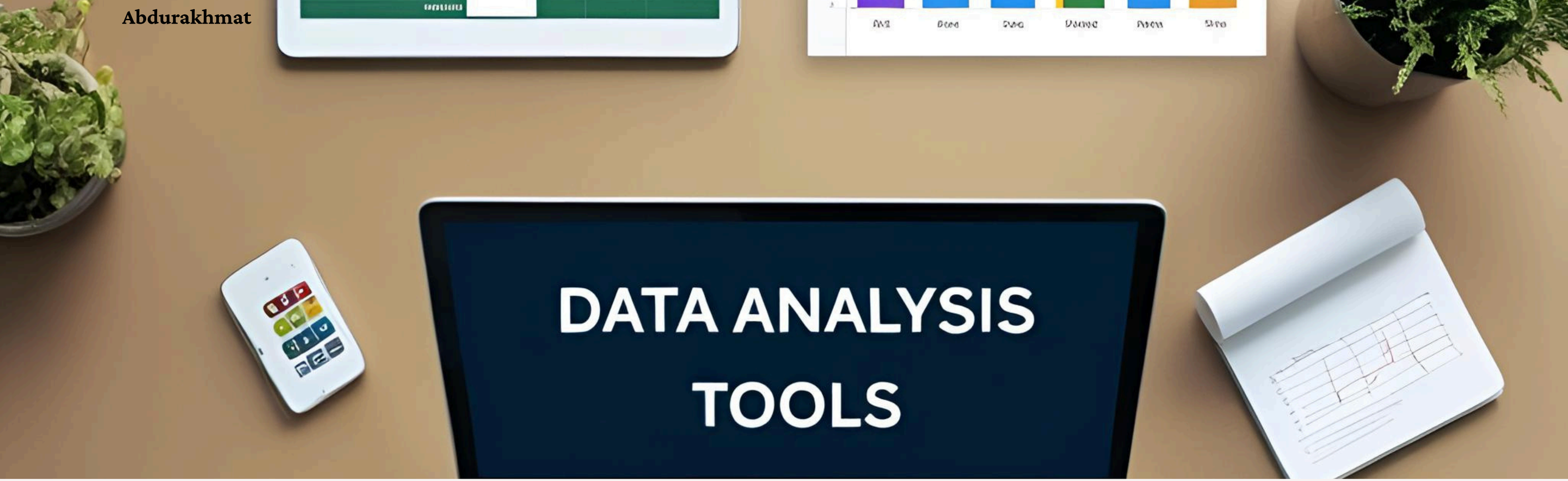
In both datasets, students consistently identified exams, grades, and lack of supportive friendships as the top contributors to stress.

3. Students Are More Willing to Share Mental Health Struggles in Anonymous Surveys Than With School Counselors

Anonymous digital surveys yielded 17% more disclosures of mental health symptoms compared to in-person interviews among students.



Abdurakhmat



Coding

- Python (Core language for analysis)
- Jupyter Notebook (Coding environment)

Data management

- Pandas (Data handling and numeric operations)
- Seaborn (Data visualization)

Data review

- Microsoft Excel (Initial data review and chart previews)
- Google Forms (Survey collection)
- GitHub (Team code repository)

Introduction to implementation

- Project implementation overview
- Tools: Excel, Python, Tableau
- From raw date to actionable insights

Data cleaning

- Step 1: Cleaning raw data
- Tool: Excel
- Tasks: Remove duplicates, fix formats, handle missing values

Data analysis with Python

- Step 2: Python analysis
- Tools: Pamdas, Matplotlib, Seaborn
- Found trends & correlations

Visualization with dashboards

- Step 3: Dashboard creation
- Tools: Tbleau/Power BI
- Interactive visual storytelling

Summary

- Human-centered insights
- Data-driven mental health support
- Real-world impact

Contributors:

1. **Sunnatjon - Introduction/Overview**

2. **Benefits of dataset overview Survey overview (Akromjon)**

3. **Kamronbek - Insights from the data analysis**

4. **Abdurakhmat - Data Tools Analysis**

5. **Javokhir - Implementations of the project**

Thank you