

Midterm Project –README FILE

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Program: Master of Information

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Introduction

This program examines the Tech Use & Stress Wellness.csv data provided on Kaggle to explore the impact of technology use on people's lives and their well-being. The dataset includes information on the time spent on electronic devices such as mobile phones, laptops, sleep patterns, different indicators of mental health, eating habits, and physical activity. The program performs data analysis on quantitative variables and implements eight functions. It prints the output to both the console and a user-specified text file.

The project was implemented without using any major built-in functions and uses the Pandas library for importing data from the CSV file.

Running the Program

To execute the program, download the file 'Midterm_Colab_Lekshmy_Nanditha.py' and the dataset 'Tech_Use_Stress_Wellness.csv' on Kaggle.

[tech-use-and-stress-wellness.csv on Kaggle](#)

Run the program through the terminal and follow the prompts to enter the names of the input and output files. If the user wants to execute the program again, the user must type yes.

...

```
python3 main.py
```

Enter the input file name to be read (CSV): Tech_Use_Stress_Wellness.csv

Enter the output file name to be written (TXT): output_file.txt

Do you want to run the program again: Yes or No: yes

...

The following output is printed to the console and to output_file.txt when executing the program using the dataset on Kaggle. I have attached a screenshot from Google Colab console.

Midterm_Colab_Lekshmy_Nanditha.ipynb

File Edit View Insert Runtime Tools Help

Commands + Code + Text ▶ Run all

```
Enter the input file name to be read (CSV): Tech_Use_Stress_Wellness.csv
Enter the output file name to be written (TXT): output_file.txt
TECH USE AND STRESS WELLNESS ANALYSIS
CORRELATION ANALYSIS
Correlation between screen time in hours and sleep duration in hours: -0.41

MENTAL HEALTH STATISTICS
Variance of mental_health_score: 171.47
Standard Deviation of mental_health_score: 13.09

SLEEP DURATION STATISTICS
Least amount of sleep (hrs): 5.4
Most amount of sleep (hrs): 9.0
Range of sleep duration (hrs) 3.60

MEDIAN
Median for the physical activity hours per week: 2.3

MODE
Mode for the sleep quality: 4.0

AVERAGE SCREEN TIME BY GENDER
Average screen time of female: 5.02
Average screen time of male: 5.04
Average screen time of other: 5.20

Oldest participant's age: 74

OUTLIERS DETECTION
IQR: 67.95
lower_bound: 6.52
upper_bound: 278.33
List of values that are outliers in caffeine intake: [0.0, 295.5, 284.5, 287.9, 311.3, 5.6, 279.2, 286.9, 324.7, 296.4, 341.2, 303.4, 282.2, 309.5, 2.0, 284.8, 299.8, 327.9]
File saved
Do you want to run the program again: Yes or No: No
```