

My Data Science Project Title

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Abstract—In this section, please provide a concise summary of your entire data science paper. It gives the reader a quick overview of your research problem, approach, key findings, and significance. The abstract should be self-contained, allowing someone to understand the essence of your paper without reading the entire document.

Index Terms—Lists keywords that describe the main topics, algorithms, techniques, and domains of your paper.

I. INTRODUCTION

In this section, you will introduce the overall topic of your research and establish the importance of studying personal data such as sleep, productivity, mood, gaming behavior, or physical activity. You should provide the broader context of why these behaviors matter, identify real-world issues related to the variables you collected, and explain the significance of analyzing your own data. This section must clearly state your research objectives and present the research questions your study aims to answer, setting the stage for the rest of the paper.

In summary, you should answer the key questions in this section.

- 1) What topic does this study focus on?
- 2) Why is this topic important?
- 3) What have prior studies found in this area?
- 4) What gap or problem does this project address?
- 5) What are your research goals?
- 6) What are your research questions?

II. LITERATURE REVIEW

In this section, you will review and discuss previous work related to your topic and demonstrate how your research builds on or differentiates from existing studies. You will examine published findings on sleep, mood, gaming behavior, sports activity, productivity, or other behavioral metrics that are relevant to your dataset. This section should explain what methods prior researchers used, what conclusions they reached, and what gaps or limitations they identified. By connecting your personal project to the academic literature, you justify the relevance of your study and show how it contributes to ongoing discussions. Please include the subsections enumerated below and answer the key questions in each subsection.

In summary, you should answer the key questions in this section.

- 1) What did previous studies examine (sleep, gaming, sports, mood, productivity)?

- 2) What data collection and analysis methods did they use?
- 3) What were their main findings?
- 4) What limitations did they mention?
- 5) How is your project similar or different?

III. METHODOLOGY

In this section, you will describe exactly how you conducted your study in clear, replicable detail. You should explain what personal variables you collected, how you measured them, what tools or apps you used for recording data, and how long the data collection period lasted. This chapter also includes the definitions of each variable, how you cleaned and prepared the data, and which statistical techniques you used to analyze your results. The goal of this section is to provide enough detail that another researcher could repeat your study using only your description.

A. Participants

- You (the student) as the subject
- Demographics (age range, student profile—no private info)

B. Data Collection Methods

- Variables collected (e.g., sleep, gaming time, running distance, mood)
- Frequency of data logging (daily/weekly)
- Tools or apps used (Google Sheets, Strava, Fitbit, phone logs, manual diary)

C. Operational Definitions

1) Precise definitions of each variable:

- Productivity = number of hours studied per day
- Mood = 1–5 self-rating scale

D. Data Cleaning

- Removing outliers
- Handling missing values
- Converting text to numeric
- Standardizing units

E. Statistical Analysis

- Statistical tests you used (t-test, correlation, ANOVA, regression)
- Visualization tools (bar charts, scatterplots, etc.)

In summary, you should answer the key questions in this section.

- 1) What variables did you collect and why?
- 2) How did you measure each variable?
- 3) What period does your dataset cover?
- 4) What apps or tools did you use to track data?
- 5) How did you clean or preprocess the dataset?
- 6) What statistical methods did you select and why?
- 7) Did you consider bias or measurement errors?

IV. RESULTS

In this section, you will present the outcomes of your analysis using tables, charts, statistical tests, and summary metrics. You should describe the patterns, trends, and relationships observed in your personal dataset without yet interpreting their deeper meaning. This chapter focuses on reporting what the data shows—from descriptive statistics to correlations, visualizations, or hypothesis-testing results. Each figure or table must be accompanied by a clear explanation of what it represents. This section is purely about presenting the findings in an objective and organized manner.

Present data clearly with tables, graphs, and summary statistics. Please include:

- Mean, median, SD
- Histograms
- Time-series trends
- Correlation matrix
- Results of statistical tests (p-values, effect sizes)

Each figure must have:

- A title
- A caption
- Interpretation in the text

In summary, you should answer the key questions in this section.

- 1) What does the dataset look like overall?
- 2) What patterns or trends appear in the descriptive statistics?
- 3) What relationships were found between variables?
- 4) Did any statistical tests show significant results?
- 5) What graphs best illustrate the findings?

V. DISCUSSION

In this section, you will interpret the results you presented and explain what they mean in the context of your behavior and the existing literature. You should discuss possible reasons behind the patterns in your data, compare your findings with those of previous studies, and highlight unexpected outcomes. This chapter also addresses the limitations of your research, including issues such as self-report bias, small sample size, or missing entries. Finally, you should offer recommendations for future research or improvements to the study design. The goal is to make sense of your results and show how they relate to broader knowledge.

A. Interpretation of Results

- Explain why patterns exist (e.g., Late-night gaming reduced sleep hours on weekdays).

B. Comparison to Related Work

- Support or contradict prior studies.

C. Limitations

- Small sample size (n=1)
- Self-report bias
- Missing entries
- Short data collection window

D. Recommendations and Future Work

- Suggestions for other students
- Alternative methods for future research
- Variables to include next time

In summary, you should answer the key questions in this section.

- 1) What do your results mean?
- 2) Are the results similar or different from prior research?
- 3) What might explain the trends?
- 4) What are the limitations of your study?
- 5) What improvements can future researchers make?

VI. CONCLUSION

In this section, you will summarize the most important insights from your study and answer your original research questions. You should briefly restate the purpose of your project, highlight the key findings, and explain what you personally learned from analyzing your own data. This chapter provides closure by emphasizing how your results contribute to a better understanding of your behavior and suggesting how these insights might be applied in daily life. The conclusion should be concise but meaningful.

In summary, you should answer the key questions in this section.

- 1) What are the key findings?
- 2) What did you learn about yourself?
- 3) How can the findings be applied in real life?
- 4) What is your final conclusion?

REFERENCES

Please number citations consecutively within brackets [1]. The sentence punctuation follows the bracket [2]. Refer simply to the reference number, as in [3]—do not use “Ref. [3]” or “reference [3]” except at the beginning of a sentence: “Reference [3] was the first . . .” Number footnotes separately in superscripts. Place the actual footnote at the bottom of the column in which it was cited. Do not put footnotes in the abstract or reference list. Use letters for table footnotes. Unless there are six authors or more give all authors’ names; do not use “et al.”. Papers that have not been published, even if they have been submitted for publication, should be cited as “unpublished” [4]. Papers that have been accepted for publication should be cited as “in press” [5]. Capitalize only the first word in a paper title, except for proper nouns and element symbols. For papers published in translation journals, please give the English citation first, followed by the original foreign-language citation [6].