# PROJECT TITLE HERE

## A

## DISSERTATION

*Submitted for Partial fulfillment of the Requirement*
*For the award of the degree of*

## MASTER OF SCIENCE

## IN

## PHYSICS

*Submitted by*

## MANDEEP

## (Registration no. 22222222)

Under the guidance of

## PROFESSOR NAME

Assistant/Associate Professor



**DEPARTMENT OF PHYSICS**

**DR B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY**
**JALANDHAR - 144008, PUNJAB (INDIA)**
**MAY 2024**

**DR B R AMBEDKAR NATIONAL INSTITUTE OF TECHNOLOGY JALANDHAR - 144008, PUNJAB (INDIA)**

# CERTIFICATE

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It is my pleasure to certify that **MANDEEP** worked under my supervision for the M.Sc. dissertation entitled **"PROJECT TITLE HERE"** and his/her work is of the level of requirement set up for the dissertation in Physics by Dr. B. R. Ambedkar National Institute of Technology, Jalandhar.

**Date: ..................**                    **MANDEEP**

                                                **ROLL NO: 22222222**

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

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The viva-voice examination of **MANDEEP**, M.Sc. Physics, has been held on ……………

**External Examiner**          **Internal Examiner**          **Supervisor**

**Head of Department**          **Chairman DPGC**

# CANDIDATE'S DECLARATION

I hereby, declare that the work presented in the dissertation entitled **"PROJECT TITLE HERE"** for partial fulfillment of the requirement for the degree of Master of Science in Physics and submitted to the Department of Physics at Dr. B. R. Ambedkar National Institute of Technology Jalandhar, is an authentic record of my own work carried out during the period from ……………. 2021 to ……………. 2022 under the supervision of **PROFESSOR NAME**

The matter presented in this thesis has not been submitted elsewhere in part or fully to any other University or Institute for the award of any other degree.

**Signature of the student**
Name: MANDEEP
Roll No: 22222222

Dedicated to

my mother

**Alice Smith**

and

my father

**Bob Johnson**

# ACKNOWLEDGEMENTS

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**MANDEEP**

NIT Jalandhar

Date:  ……………..

# ABSTRACT

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**Keywords**: Lorem ipsum

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# Chapter 1

# Introduction

## 1.1 Background

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## 1.2 Problem Statement

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## 1.3 Objectives of the Study

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## 1.4 Research Questions

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## 1.5 Significance of the Study

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## 1.6 Structure of the Thesis

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# Chapter 2

# Literature Review

## 2.1 Introduction

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## 2.2 Overview of the Topic

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## 2.3 Theoretical Framework

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## 2.4 Previous Research

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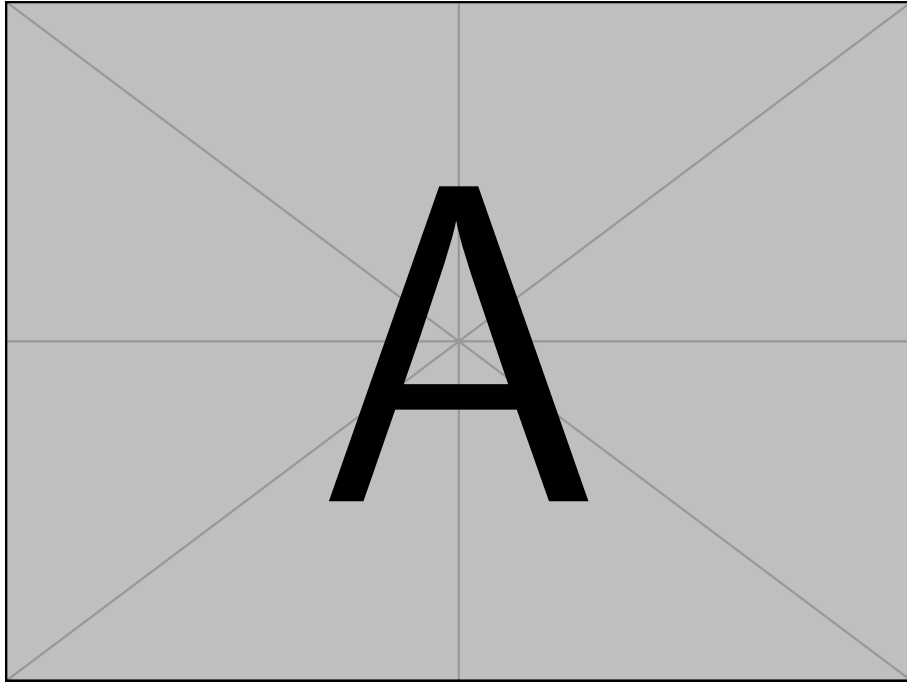
Figure 2.1: An example of a single figure.

## 2.5   Research Gaps

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## 2.6   Summary

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# Chapter 3

# Experimental/Theoretical model

## 3.1 Introduction

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## 3.2 Research Design

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## 3.3 Data Collection Methods

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| Header 1 | Header 2 | Header 3 | Header 4 |
|---|---|---|---|
| Row 1 Col 1 | Row 1 Col 2 | Row 1 Col 3 | Row 1 Col 4 |
| Row 2 Col 1 | Row 2 Col 2 | Row 2 Col 3 | Row 2 Col 4 |
| Row 3 Col 1 | Row 3 Col 2 | Row 3 Col 3 | Row 3 Col 4 |

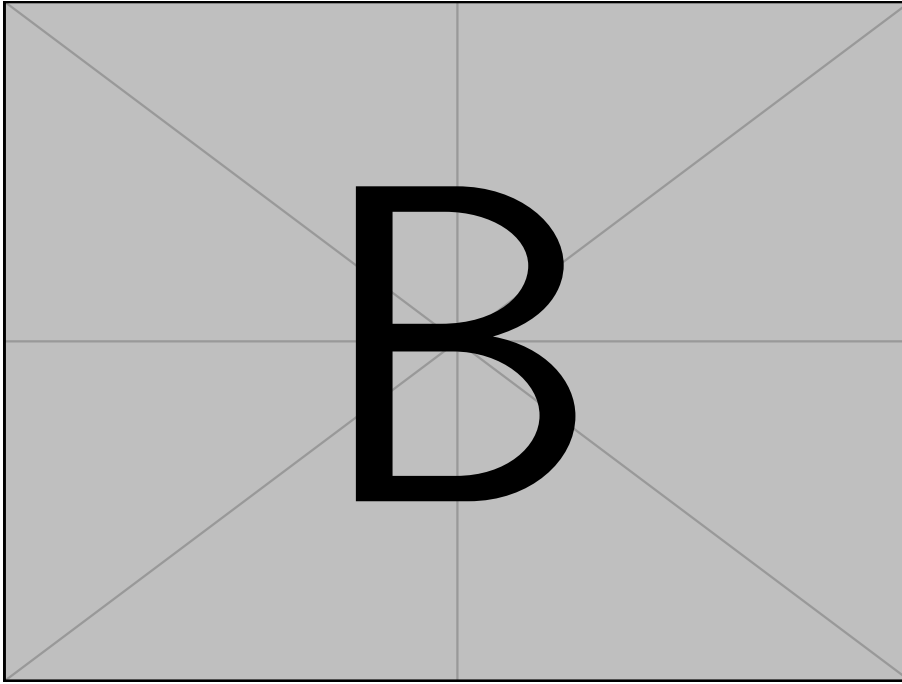Table 3.1: A table formatted with the booktabs package.

Figure 3.1: First subfigure.

## 3.4 Data Analysis Techniques

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## 3.5 Ethical Considerations

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## 3.6 Limitations

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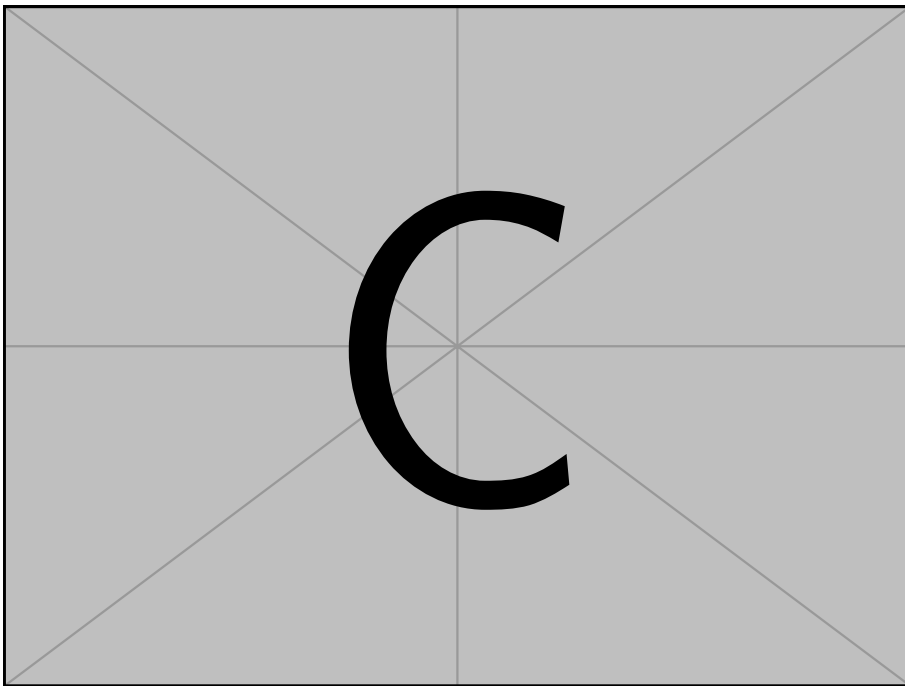
Figure 3.2: Second subfigure.

Figure 3.3: An example of two subfigures side by side.

# Chapter 4

# Results and Discussions

## 4.1 Results

### 4.1.1 Introduction

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### 4.1.2 Descriptive Statistics

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### 4.1.3 Inferential Statistics

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| Multi-row | Multi-column | | |
|-----------|----------|----------|----------|
|           | Column 1 | Column 2 | Column 3 |
| Data 1    | Data 2   | Data 3   | Data 4   |
| Data 5    | Data 6   | Data 7   | Data 8   |

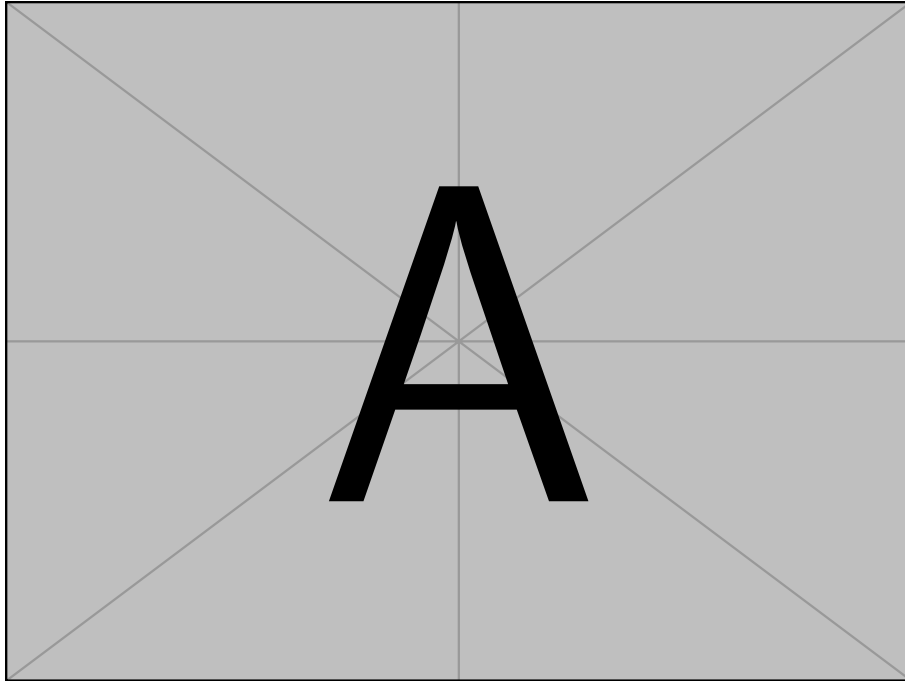Table 4.1: A table with multi-row and multi-column formatting.

Figure 4.1: An example of a single figure.

### 4.1.4 Summary of Findings

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## 4.2 Discussion

### 4.2.1 Introduction

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### 4.2.2 Interpretation of Results

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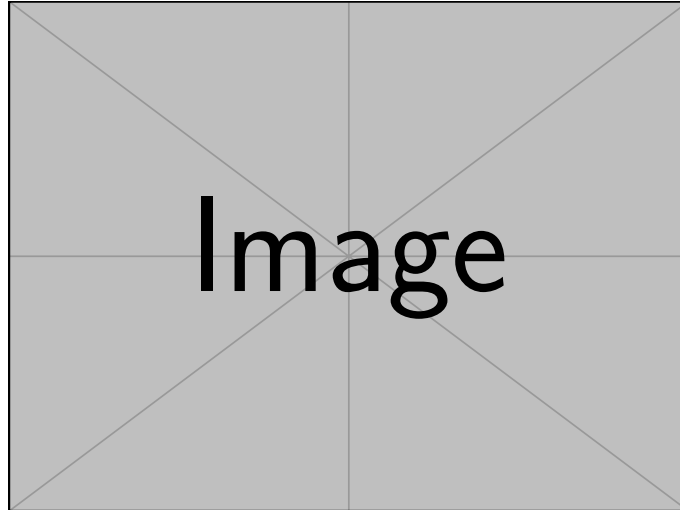
Figure 4.2: This is a sample figure with a caption.

### 4.2.3 Comparison with Previous Research

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### 4.2.4 Implications of the Findings

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### 4.2.5 Limitations of the Study

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### 4.2.6 Recommendations for Future Research

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# Chapter 5

# Conclusion

## 5.1 Summary of the Study

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## 5.2 Main Findings

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## 5.3 Contributions to Knowledge

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## 5.4 Practical Implications

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## 5.5   Final Thoughts

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# Bibliography

E. Brown. *Data-Driven Approaches to Climate Change Modeling*. PhD thesis, University of California, Berkeley, Berkeley, CA, 2022.

W. contributors. Artificial intelligence – wikipedia, the free encyclopedia. [Online; accessed 19-May-2024], 2023. https://en.wikipedia.org/wiki/Artificial_intelligence.

J. Doe. The impact of machine learning on healthcare. *Journal of Medical Informatics*, 15(3):234–245, July 2021. doi: 10.1007/s11623-021-01234-5.

R. Johnson and A. White. Deep learning for autonomous vehicles: A comprehensive study. Technical Report AI-TR-2018-03, MIT Artificial Intelligence Lab, Cambridge, MA, 2018.

M. Lee and S. Green. Advances in natural language processing. In *Proceedings of the 2019 Conference on Computational Linguistics*, pages 123–130, Florence, Italy, 2019. ACL.

J. Smith. *Understanding AI: Principles and Practices*. Tech Press, New York, 2nd edition, 2020.