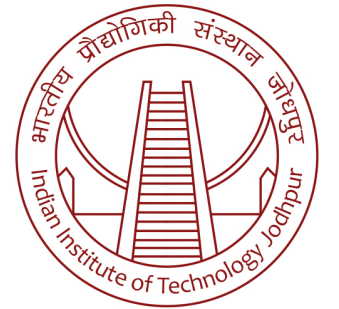


Title of the Doctoral Thesis

A thesis submitted by
Name of the Student

in partial fulfillment of the requirements for the award of the degree of
Name of the Degree



॥ त्वं ज्ञानमयो विज्ञानमयोऽसि ॥

Indian Institute of Technology Jodhpur
Name of the Department

August, 2024

Declaration

I hereby declare that the work presented in this thesis titled “*Title of the Doctoral Thesis*”, submitted to the Indian Institute of Technology Jodhpur in partial fulfilment of the requirements for the award of the degree of Name of the Degree, is a bonafide record of the research work carried out under the supervision of Name of the Supervisor. The contents of this thesis, in full or in parts, have not been submitted to, and will not be submitted by me to, any other Institute or University in India or abroad for the award of any degree or diploma.

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Certificate

This is to certify that the thesis titled “ *Title of the Doctoral Thesis* ”, submitted by Name of the Student (Roll Number of the Student) to the Indian Institute of Technology Jodhpur for the award of the degree of Name of the Degree, is a bonafide record of the research work done by him under my supervision. To the best of my knowledge, the contents of this report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

Signature

Name of the Supervisor

Ph.D Thesis Supervisor

Abstract

In the grand academic tradition of IIT Jodhpur, where minds are honed and sleep cycles are forgotten, this thesis stands as a monumental testament to the sleepless nights, countless simulations, failed experiments, and cups of tea that fueled its creation. Under the wise and occasionally mysterious guidance of my supervisor(s), I have ventured into the abyss of research, hoping to emerge with something more than just existential dread and a permanent squint.

This document represents the culmination of the many ups and downs of my Ph.D. journey—mostly downs if we’re being honest. Yet, within these pages lies the essence of technical brilliance (I hope), scientific inquiry (mostly), and a few well-timed epiphanies at 3 AM. It is more than a mere collection of chapters; it is a chronicle of academic survival. It represents my attempt to synthesize years of work, and countless cups of tea into a narrative that is both intellectually rigorous and mercifully brief (for the reader’s sake).

Here, you will find the detailed academic tale of occasional existential crisis, which is fondly referred to as "research"- as they say. If I had explained it to my past self, it would have sounded like an obscure sci-fi plot. Through this thesis, I aim to contribute to the vast ocean of knowledge—by at least a tiny drop—and to prove that despite my shaky relationship with proper sleep, my brain can still churn out something helpful and intelligent. Think of it as the ultimate story of your academic adventure—a tale of triumph over tricky hypotheses and of victory against vicious reviewers.

In the end, if this thesis helps to impart even a small bit of education in professional technical communication, then perhaps it wasn’t all just a caffeine-induced hallucination after all.

Acknowledgements

The acknowledgments and the people to thank go here. Don't forget to include your thesis advisor... ;)

I thank my Ph.D. Thesis Supervisor, *Name of the Supervisor* for introducing me to the area of technical writing and its nuances. In the process, I have learned many technical and non-technical aspects of professional work. I am grateful to him for his help and patience and for constantly reminding me to be perfect in the little things I do each day. Also, I am indebted to the Members of the Doctoral Committee, Professor XYZ, and Professor ABC, for their enthusiastic and continued guidance during the research work.

I thank Professor OMG for his classes on self-awareness, which helped me to overcome the tough times during the Doctoral Program. I thank Professor SPQ for providing access to the Language Laboratory, and to the computational hardware and software facilities alongside.

My stay at the Institute was a wonderful experience because of my friends, XYZ, for all the liveliness they infused into the non-academic part of the days at IIT Jodhpur...

I acknowledge and thank my family, especially my sister ABC, for the patience and love with which they ushered me and for bearing with me even when I was not spending less time with them. I pay respects to my parents for all their love, sacrifices, and blessings...

Name of the Student
Ph.D. Student

This thesis is dedicated to my family members for their limitless support, encouragement and to you as a reader

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List of Symbols

Other symbols

V Constant volume

ν Friction index

Physics constants

c Speed of light in a vacuum

h Planck constant

G Gravitational constant

RH relative humidity in percentage

List of Abbreviations

1 Introduction

1.1 INTRODUCTION

Welcome to this L^AT_EX Thesis Template, a beautiful and easy to use template for writing a thesis using the L^AT_EX typesetting system.

If you are writing a thesis (or will be in the future) and its subject is technical or mathematical (though it doesn't have to be), then creating it in L^AT_EX is highly recommended as a way to make sure you can just get down to the essential writing without having to worry over formatting or wasting time arguing with your word processor.

L^AT_EX is easily able to professionally typeset documents that run to hundreds or thousands of pages long. With simple mark-up commands, it automatically sets out the table of contents, margins, page headers and footers and keeps the formatting consistent and beautiful. One of its main strengths is the way it can easily typeset mathematics, even *heavy* mathematics. Even if those equations are the most horribly twisted and most difficult mathematical problems that can only be solved on a super-computer, you can at least count on L^AT_EX to make them look stunning.

1.2 SECTION1

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1.3 RESEARCH MOTIVATION

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1.4 RESEARCH OBJECTIVE

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1.4.1 RESEARCH CONTRIBUTIONS

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ORGANIZATION OF THESIS

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Figure 1.2.1: Intelligent sensor architecture

Table 1.2.1: Components used in this experiment with specifications

Components	Specifications
Microcontroller	Arduino nano (ATmega328)
Ultrasonic sensor	HC-SR04
Temperature and humidity sensor	DHT22 (AM2302)
Bluetooth module	HC-05

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1.5 LIST OF PUBLICATIONS

Experimental

2.1 SECTION 1

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Publications

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