**Natural Language Processing Lab**

**Project Report**

**ON**

# Title of the Project

**BACHELOR OF TECHNOLOGY**
**IN**
**Artificial Intelligence and Machine Learning**

SUBMITTED BY

**PRN & NAME OF THE STUDENT IN CAPITAL LETTERS**
**PRN & NAME OF THE STUDENT IN CAPITAL LETTERS**
**PRN & NAME OF THE STUDENT IN CAPITAL LETTERS**

**Under the Guidance of**
**Guide Name**
**Co-Guide Name**


**SYMBIOSIS INSTITUTE OF TECHNOLOGY**

**(A CONSTITUENT OF SYMBIOSIS INTERNATIONAL UNIVERSITY)**

**Pune - 412115**

**2025**

## ABSTRACT

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here [1].


**Guidelines for Abstract**

- Brief summary of:
  - Problem statement
  - Objective of the project
  - Dataset used
  - Algorithms/techniques applied
  - Key results and performance metrics
- Avoid citations or figures here.
- Abstract should be a single para


**Keywords:**

List 4–6 keywords like:

NLP, Classification, Neural Networks, Feature Extraction, Accuracy

# CHAPTER 1

# INTRODUCTION

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here [1].

## 1.1 Background

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here [2]. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here

**Guidelines**

- Introduce the **problem domain** (e.g., medical diagnosis, crop prediction, image classification, social media analytics)
- Explain **why the problem is important**
- Clearly state:
  - Problem statement
  - Objectives of the project
  - Research questions or hypotheses

# CHAPTER 2

# LITERATURE REVIEW

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here [1]. This is citation of references.

## Guidelines

- Summarize previous research or existing ML approaches.
- Mention datasets, models, evaluation metrics used in past works.
- Identify **gaps or limitations** in the existing work that your project addresses.
- Cite all references properly.
- Make tabular summary about past works.

| Sr. No. | Author & Year | Algorithm / Technique Used: | Dataset Used | Key Findings / Contributions | Limitations / Gaps Identified |
|---|---|---|---|---|---|
| | | | | | |

*(Start New Chapter on new page)*

# CHAPTER 3

# METHODOLOGY/PROPOSED SYSTEM

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here [1]. This is citation of references.

**Guidelines:**

## a. Implementation Details

- Provide step-by-step explanation:
- Data pre-processing pipeline
- Feature extraction or dimensionality reduction
- Model training
- Testing procedure
- Mention computing environment (e.g., CPU/GPU, software versions)
- Include relevant code snippets (only key parts, not the full code).

## b. System Architecture

- Block diagram or flowchart of your system.
- Data flow from input to output.

## c. Dataset Description

- Dataset name and source (e.g., Kaggle, UCI, self-collected)
- Number of samples, features, labels
- Data types and preprocessing steps (cleaning, normalization, feature selection)

## d. Model Design

- Algorithms or architectures used (e.g., SVM, CNN, Random Forest)
- Equations or logic for the model
- Hyperparameters used and their justification

## e. Training and Validation

- Train-test split ratio (e.g., 80:20)
- Cross-validation method (if used)
- Evaluation metrics (Accuracy, Precision, Recall, F1-score, AUC, etc.)
- Tools/libraries used (e.g., Python, Scikit-learn, TensorFlow, PyTorch)

# CHAPTER 4

# RESULTS AND DISCUSSIONS

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here.

## Guidelines

- Present results using:
  - Evaluation metrics
  - Tables and graphs (Confusion Matrix, ROC Curve, Accuracy plots)
- Compare models or methods if multiple approaches were tested.
- Analyze:
  - Why one model performs better than another
  - Strengths and weaknesses
- Discuss how results align with objectives or expectations.

# CHAPTER 5

# CONCLUSION AND FUTURE SCOPE

Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here. Insert text here.

**Guidelines**

- Summarize what you achieved.
- Restate the problem, approach, and outcomes.
- Mention if objectives were met.
- Discuss the **real-world significance** or applications of your work.

**Futurescope** not more than 2-4 lines

Suggest possible extensions such as:

- Larger or more diverse datasets
- Advanced models or optimization
- Integration into real-world systems or applications

## REFERENCES

[1] D. V. Lindberg and H. K. H. Lee, "Optimization Under Constraints by Applying an Asymmetric Entropy Measure," *Journal of Computational and Graphical Statistics*, vol. 24, no. 2, 2015, doi: 10.1080/10618600.2014.901225.

[2] F. Yang *et al.*, "ViT-based Terrain Recognition System for wearable soft exosuit," *Biomimetic Intelligence and Robotics*, vol. 3, no. 1, 2023, doi: 10.1016/j.birob.2023.100087.

***(Use IEEE referencing and citation style in Mendeley)***