DEBRE BERHAN UNIVERSITY

COLLEGE OF COMPUTING

DEPARTMENT OF

Course:

PROJECT TITLE…

By:

Name ID

Summited to:

Date

Debre Berhan, Ethiopia

Table of content

CHAPTER ONE

1. INTRODUCTION

1.1. Back ground

Here, you have to discuss AI, NLP, and ML concepts by integrating them with your topic. Additionally, if your project is for an organization, explain about that organization in this section.

1.2. Motivation

What motivated you to work on this title? Provide clear reasons.

1.3. Statement of the problem

Here, you have to explain why your project is worthwhile, what problem you are going to solve, what has already been done, and what gap your work aims to fill.

1.4. Objectives

1.4.1. General Objective

The aim of this study is to develop …….. put your main goal here like this.

1.4.2. Specific objectives

(Explain each action you need to perform in order to achieve your main goal, as shown in the example below.)

To achieve the general objective, the following specific objectives will be addressed.

To review different literature

- To collect …..and apply pre-processing to …….
- To create a dictionary ……..
- To build ….. system prototype.

- To measure performance ….. bla bla

1.5. Significance of the study

Explain clearly who will benefit from your work.

1.6. Scope and limitations

Describe the scope of the study and discuss its limitations like……This study only focus on ……..

1.7. Methodology

Explain the methods, tools, and techniques used to carry out the study.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Introduction

Here you need to write an overview of existing studies, theories, and related work relevant to the research topic. for example for someone who work on SA….

Sentiments are feelings, thoughts; emotions of an individual for a particular event or topic e.g. love/hate, bad/good. Sentiment analysis is the study of the subjectivity (neutral vs. emotionally loaded) and polarity (positive vs. negative) of a text. It relies on sentiment lexicons, that is, large collections of words, each annotated with its own positive or negative orientation (i.e., prior polarity). ……

……

The major applications of Opinion mining and sentiment analysis are

1. Purchasing Product or Service: While purchasing a product or service, taking right ……..
2. ……

3. ….

2.2. Types of opinions

2.3. Basic Components of Opinion Mining

2.4. Steps of sentiment analysis

There are some procedures we should follow for sentiment analysis: -

2.5. Approaches of sentiment analysis

Sentiment analysis played a vital role in different research area and there are a lot of methods to conduct research about sentiment analysis [17]. ……

2.5.1. Natural Language Processing (NLP)

2.6. Related works

Here explain some papers related to your title you have to add name of author , objective, dataset they used including amount(if it is available) , weakness, strength, methods they use and then result with its performance like below….

Currently in field of Natural Language Processing (NLP) Opinion mining the most popular and hot research area. Many researchers are has been studied in area of opinion mining especially for English language. Related researches are done for other languages like France, Chinese, and India etc. Although they are less in number there are also some researchers conducted on local languages like Amharic and Afaan Oromo. Different researchers used different kinds of approaches such as Lexicon-Based, Natural Language Processing Toolkit, machine learning and others.

[22] Proposed NLP dependent preprocessed data frame to filter tweets

In [23] lexicon-based sentiment analysis has been applied for

[24] Proposed

[25] Tulu had done

Author	Objectives/goals	Methods/ techniques	Data Resource /domain	Result
(Tulu Tilahun, *2013)*	Build Aspect level opinion mining and summarization model for Amharic language.	Lexicon/dictionary based	Amharic blog	Two experiments are conducted. 1st 95.2% of precision and 26.1% of recall 2nd 78.1% of precision and 66.8% of recall
(Yohannes Mekonnen, 2018)	build Amharic sentiment analysis system for the program that polarity	Dictionary and rule-based	Kana TV Facebook page	85% of accuracy, 95% of precision, 89% of recall and 91% of f-score.

CHAPTER THREE

3. Methodology

3.1. Introduction

3.1 Research Design

Explain the overall approach of the study (e.g., experimental, analytical, prototype-based), and why it is suitable for your project.

3.2 Data Collection

- Describe the datasets you will use (public datasets, organization-provided data, or data you collected).
- Mention the size, format, and preprocessing steps (cleaning, normalization, tokenization for NLP).

3.3 System Architecture / Framework

- Describe the architecture of your system or model.

- Include diagrams if needed to show the workflow of your AI/ML/NLP solution.

3.4 Algorithms and Techniques

- Explain the machine learning or NLP algorithms you are using (e.g., classification, clustering, deep learning, transformers).
- Justify why these algorithms are appropriate for your problem.

3.5 Implementation Tools

- List the software, programming languages, libraries, or frameworks used (e.g., Python, TensorFlow, PyTorch, NLTK, spaCy).

3.6 Evaluation Metrics

- Explain how you will evaluate your model or system (accuracy, precision, recall, F1-score, etc.).
- Mention any baseline comparisons or benchmarks.

3.7 Workflow / Step-by-Step Procedure

- Describe the sequential steps you will take to develop, train, and test your system.
- Include data preprocessing, model training, validation, and testing phases.

3.8 Limitations

- Discuss any constraints, assumptions, or potential challenges in your methodology.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

Provide a brief overview of what this chapter will cover—mainly presenting the results of your experiments, analyses, or system, and discussing their significance.

4.2 Experimental Setup

- Describe how the experiments were conducted.
- Include details about datasets, hardware/software, training parameters, and any preprocessing steps.

4.3 Results

- Present your findings using tables, charts, graphs, or figures.
- Highlight key outcomes of your model or system.

4.4 Discussion

- Interpret the results: what do they mean in the context of your research question?
- Compare your results with existing studies or benchmarks.
- Explain any unexpected outcomes or patterns.

4.5 Performance Evaluation

- Analyze model performance using evaluation metrics (accuracy, precision, recall, F1-score, etc.).
- Discuss strengths and weaknesses of your approach.

4.6 Summary

- Summarize the key findings and their implications.
- Provide a bridge to the conclusion chapter.

CHAPTER FIVE
CONCLUSION AND RECOMMENDATIONS

4. CONCLUSION

- Summarize the main findings of your study.
- Highlight how your project addressed the research problem or objectives.
- Emphasize the contributions of your work to the field of AI/ML/NLP.

For example Currently analysis of sentiments and opinions has spread across many fields. ……..In this study we tried to make sentence level sentiment analysis in Amharic language. We collect …….. comments from ……... The collected data processed by applying ……. before we build the model. We use …… to build and classify and it achieved …….0.55 accuracy, precision 0.78, recall 0.67 and f1-score 0.68... The most difficulty in this study was ……..

5.2 Recommendations

- Suggest possible improvements or future work.
- Indicate how your research can be applied in practical scenarios.
- Discuss any extensions or further studies that can build on your project.

5.3 Limitations (Optional)

- Briefly restate any limitations of your study that could affect results or generalizability.

Group contribution

Stud 1	Id 1 What he/she did
Stud 2 etc	Id 2 What he/she did

References

- List all the sources you cited in your report, including books, research papers, websites, and other materials.

- Follow a consistent citation style throughout (e.g., APA, IEEE, MLA, or Harvard).