

MAJOR/MINOR PROJECT REPORT WRITING GUIDELINES AND FORMAT

(Advanced College of Engineering and Management)

Your project report should follow the following topics and standards. It is the responsibility of the student and the supervisor to ensure that the report complies in all respects to these guidelines.

Cover Page

Title Page

Dedication (optional)

Declaration (optional)

Certificate of approval

Copyright

Acknowledgement

Abstract

Table of Contents

List of Tables (Optional)

List of Figures (Optional)

List of Symbols and Abbreviations (Optional)

Glossary (Optional)

Main body

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Requirement Analysis

Chapter 4: System Design and Architecture

Chapter 5: Methodology

Chapter 6: Implementation Details

Chapter 7: Result and Analysis

Chapter 8: Conclusion and Future Work

Appendix

References

Cover Page: See EXAMPLE 1

Title Page: The style of the title page to be used for report is shown in EXAMPLE 2

Dedication (optional): you may dedicate your work to someone special (EXAMPLE 3)

Declaration (optional): it contains your declaration of completing this project work genuinely and legally (EXAMPLE 4).

Certificate of approval: a certificate issued by the college/university for the successful completion of this project (EXAMPLE 5)

Copyright: is a page that gives the copyright authority to the college or department to use it for the study and inspection purpose but not to produce other copies by anyone (EXAMPLE 6)

Acknowledgement: In the acknowledgement, the students thank mentors/supervisors and colleagues who supported the research. The acknowledgements should not exceed one page. (EXAMPLE 7)

Abstract: An abstract is a brief summary with objectives. It should be approximately one page (EXAMPLE 8).

Table of Contents: The table of contents lists all the parts of the report following the Table of Contents (EXAMPLE 9).

List of Tables (Optional): This is a list of all the table titles in numerical order with their page numbers. (EXAMPLE 10)

List of Figures (Optional): This is a list of all figures titles in numerical order with their page numbers. (EXAMPLE 11)

List of Symbols and Abbreviations (Optional): This is an alphabetical list of the conventional signs and shortened forms of words or phrases used in the text. (EXAMPLE 12)

Glossary (Optional): A report which contains many foreign or technical terms should include a list of them, followed by their translation or definition. These terms should be arranged alphabetically.

Main body: it is the main text of your project. All the texts of this body should be organized in chapters as shown below.

Chapter 1: Introduction
Chapter 2: Literature Review
Chapter 3: Requirement Analysis
Chapter 4: System Design and Architecture
Chapter 5: Methodology
Chapter 6: Implementation Details
Chapter 7: Result and Analysis
Chapter 8: Conclusion and Future Work

Chapter 1: Introduction

1.1 Background Introduction

1.2 Other related topics or terms that need to be introduced

1.3 Motivation

1.4 Problem Definition

1.5 Goals and Objectives

1.6 Scope and Applications

1.7 Report Organization: briefly explains all the chapters and their focus

Chapter 2: Literature Review

It contains all the existing works that have already been carried out in the field related to your project topic. You have to explain each of the works as a separate subtopic with following details.

- What is the work?
- How is it done? : Methods, techniques, technology, algorithms, any new innovations etc (details in brief)
- Its importance or applications
- Find out the drawback or limitations if any
- Criticize the work (on its drawbacks or incompleteness)

Link these criticisms on the existing works to the “**motivation**” in chapter 1 behind the reason for selecting this project. You may also include other motivation factors also.

Chapter 3: Requirement Analysis

3.1 Project requirements (Hardware and software)

3.2 Feasibility study

Chapter 4: System (or Project) Design and Architecture

4.1 Block diagram or System Architecture or Circuit Diagram: explain all the building blocks of your system in details (what and how it does the things?)

Example: Preprocessing block --- write down what and how it does

4.2 ER-Diagram (if applicable)

4.3 Data Flow Diagram and other design methods and tools (if applicable)

Chapter 5: Methodology

It may contain the same thing (blocks or units) that have been explained in chapter 4. But the explanation should be in detail in a particular sequence in which you have done your work along with detail algorithms, procedures, circuit diagrams or others which illustrate the **“how”** part in detail.

Example: Preprocessing block --- write down what and how it does along with different algorithms or diagrams that you have designed or used.

In few of the projects the chapter 4 and 5 may be combined together into **“System (or Project) Design and Methodology”**

Chapter 6: Implementation Details

It contains the details of the implementation of the things that have been explained in methodology. In short, it describes about how the methodology is implemented?

The implementation can be done using any programming language, simulators, or any other tools. Explain how you used your language or tool to implement the methodology.

You may also include your language or simulator or tool specific algorithms or diagrams.

Chapter 7: Result and Analysis

It contains the result of output of your project. The output can be numeric or graphical based. Represent or write down the results in tabular form if applicable and analyze that by using graphs or charts. Also make a comparison of your work with the existing one(s).

Chapter 8: Conclusion and Future Work

8.1 Conclusion

8.2 Limitations

8.3 Future Enhancement

Appendix: it contains the additional topics or data sheets or reference sheets or even user manual the appendix name should be give in capital alphabets starting from 'A'.

Example:

Appendix A: User Manual

References: Any approved reference format may be used, but must be used consistently throughout. The reference should follow IEEE format. (EXAMPLE 13)

FEW ADDITIONAL GUIDELINES

Language

All the project reports must be submitted in the English language.

Typeface (Font and Size)

Only **one single typeface (font)**, with its *italic* and **bold** variants, may be used through the **entire report**, including in the title page, approval page, acknowledgements, bibliography and appendices. **(Exceptions to this can be made for footnotes, subscripts and superscripts, and for tables, figures or illustrations imported from other sources.)**

**** IT IS ADVISABLE TO USE “TIMES NEW ROMAN” as the typeface**

Chapter names, declaration -to- table of contents: 16 bold

Main topic of chapter: 14 bold

Subtopic: 12 bold

Other topics: 12 bold or italic (with no numbering)

Content: 12

Justification

A report may be fully justified (i.e., have even left- and right-hand margins), or left-justified only (i.e., have ragged right-hand margins). However, the justification must be consistent throughout the body of the report.

Margins

A left margin of **1.5 inches (3.5 cm)** on all pages is required. All other margins must be **one inch (2.5 cm)** wide. Page numbers in the body of the text must be **one inch (2.5 cm) from the bottom and centered at the bottom of the page**. This means that the text ends above the page number and will be slightly more than one inch from the bottom of the paper.

The prefatory pages (everything that comes before the actual body of the text) are numbered in Arabic numerals, and have their page numbers one inch (2.5 cm)

from the bottom of the page. This includes the Approval Page. This means that the text ends two lines above the page numbering.

Spacing/Printing

Using a laser printer, the spacing should be set at **one-and-one-half (1.5) spacing**.

Spacing Within Sections of the Report

Single spacing may be used in an extensive Table of Contents, List of Tables, or List of Figures, as long as there is double or one-and-one-half spacing between chapters. The spacing must be consistent.

Single spacing may be used in extensive quotations within the body of the text.

Double or one-and-one-half spacing is required in the Abstract, Acknowledgements, etc.

Page Numbers and numbering tables and figures

All pages must be taken into account in the numbering: this includes all pages of figures, tables, legends, etc. Every single page in the report must be numbered, except the cover page. Numbering begins with the Cover Page, which is always Page I but is not shown in the page.

The lead (prefatory) pages, up to the beginning of the text (chapter), are to be numbered with Roman numerals (e.g. I, II, III, IV, etc.) centered at the bottom of the page, one inch from the bottom.

Beginning with the first page of the text, all page numbers must be in Arabic numerals (e.g., 1, 2, 3, 4 etc) at the bottom. The page numbers are to be located at the bottom and center of each page, one inch (2.5 cm) from the bottom.

Appendices must also be numbered following the rest of the report. If the bibliography ends on page 247, Appendix A begins on page 248. Numbering Appendices page A1, B1, C1, etc., is not acceptable.

Inserting or deleting a page after the report has been completed requires the repagination of all subsequent pages. Inserting "a" (e.g., 141a, 141b, 141c) is not acceptable.

Numbering of tables and figures must be consecutive, without repetition of numbers throughout the text. Numbering should be 1.1, 1.2, 1.3 etc according with chapter names. The numbers must be consistent.

Page Headers and footers

Page headers may be used as long as there is a line across the entire page to separate the header from the text.

Table of Contents (EXAMPLE 9)

The Table of Contents must include a listing of all items in the report. See General Format and Style for the order in which items must be listed. Everything, except the title page, including the Table of Contents itself, must be listed in the Table of Contents. (See Example 9)

Headings and sub-headings must be consistent between the Table of Contents and the body of the text. Although in the Table of Contents headings may be shortened to fit space requirements, the wording must be consistent enough that the reader will know that the correct heading, figure or table has been reached. All capitalization, punctuation, abbreviations, etc., must be consistent between the titles in the Table of Contents and Lists of Tables and Figures, and the actual titles as they appear in the body of the text.

Tables, Figures, charts and Equations

All tables (tabulated data) and figures (charts, graphs, maps, images, diagrams, etc.) should be prepared, wherever possible, on the same paper used to type the text and conform to the specifications outlined earlier. They should be inserted as close to the textual reference as possible.

Tables, figures and equations should be numbered sequentially chapter-wise using Arabic numerals. They are referred to in the body of the text capitalizing the first letter of the word and number as Table 5.3, Figure 3.11, Equation (4.16), etc.

If tables and figures are of only half a page or less, they may appear on the same page as text but separated above and below by triple line spacing. Font size for text should be the same as for the general text.

Good quality Line Drawings/figures must be drawn using standard software that provides vector rather than bit-map graphics. Figures must be scalable.

Images, Photographs, etc. must be scanned in resolution exceeding 200dpi with 256 greyscales for the monochrome images and 24 bit per pixel for the color images.

EXAMPLE 1: Cover Page

**DIAGNOSIS OF ABNORMAL MAMMOGRAPHIC
IMAGES USING MULTI-STAGE CLASSIFIER //16 bold**

A
Major Project //14 bold
<Project Code> //12

Submitted by-14 bold
<Student's Name> <Roll No>
<Student's Name> <Roll No>
<Student's Name> <Roll No>
<Student's Name> <Roll No> //12

In partial fulfillment for the award of the Degree of
Bachelor of Engineering //12
In
COMPUTER ENGINEERING //12



DEPARTMENT OF ELECTRONICS & COMMUNICATION AND COMPUTER
ENGINEERING //12
ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT
KUPONDOLE, LALITPUR //14

**INSTITUTE OF ENGINEERING
TRIBHUVAN UNIVERSITY //16 bold**

July, 2013 //12

EXAMPLE 2: Title Page

**DIAGNOSIS OF ABNORMAL MAMMOGRAPHIC
IMAGES USING MULTI-STAGE CLASSIFIER**

A
Major Project
<Project Code>

Submitted to
Department of Electronics & Communication and Computer Engineering

Submitted by
<Student's Name> <Roll No>
<Student's Name> <Roll No>
<Student's Name> <Roll No>
<Student's Name> <Roll No>

In partial fulfillment for the award of the Degree of
Bachelor of Engineering
In
COMPUTER ENGINEERING

Under the supervision of
<Supervisor's name>



DEPARTMENT OF ELECTRONICS & COMMUNICATION AND COMPUTER
ENGINEERING
ADVANCED COLLEGE OF ENGINEERING AND MANAGEMENT
KUPONDOLE, LALITPUR

**INSTITUTE OF ENGINEERING
TRIBHUVAN UNIVERSITY**

July, 2013

EXAMPLE 3: Dedication

Dedicated
To
My Beloved Grandmother
and
Parents, Sister, & Brother

EXAMPLE 4: Declaration

DECLARATION

I hereby declare that the Report of the P.G. Project Work entitled “**DIAGNOSIS OF ABNORMAL MAMMOGRAPHIC IMAGES USING MULTISTAGE CLASSIFIER**” which is being submitted to the **Advanced College of Engineering and Management, Tribhuvan University**, in the partial fulfillment of the requirements for the award of the Degree of **Bachelor of Engineering** in COMPUTER ENGINEERING in the **Department of Electronics & Communication and Computer Engineering**, is a bonafide report of the work carried out by us. The material contained in this Report has not been submitted to any University or Institution for the award of any degree.

<Student's Name> <Roll No.> <Signature>

<Student's Name> <Roll No.> <Signature>

<Student's Name> <Roll No.> <Signature>

<Student's Name> <Roll No.> <Signature>

Example 5: Certificate of Approval

CERTIFICATE OF APPROVAL

The undersigned certify that the final year project entitled <"Project Title"> submitted by <Name of Students> to the Department of Electronics & Communication and Computer Engineering in partial fulfillment of requirement for the degree of Bachelor of Engineering in Computer Engineering. The project was carried out under special supervision and within the time frame prescribed by the syllabus.

We found the students to be hardworking, skilled, bonafide and ready to undertake any commercial and industrial work related to their field of study and hence we recommend the award of Bachelor of Computer Engineering degree.

1.

<Supervisor's Name>

(Project Supervisor)

2.

<External Examiner's Name>

(External Examiner)

3.

<Department Head's Name>

Head

Department of Electronics & Communication and Computer Engineering

Example 6: Copyright

COPYRIGHT

The author has agreed that the library, Advanced College of Engineering And Management may make this report freely available for the inspection. Moreover, the author has agreed that permission for the extensive copying of this project report for the scholarly purpose may be granted by supervisor who supervised the project work recorded herein or, in his absence the Head of The Department wherein the project report was done. It is understood that the recognition will be given to the author of the report and to the Department of Electronics & Communication and Computer Engineering, ACEM in any use of the material of this project report. Copying or publication or other use of this report for financial gain without approval of the department and author's written permission is prohibited. Request for the permission to copy or to make any other use of the material in this report in whole or in part should be addressed to:

Head of Department

Department of Electronics & Communication and Computer Engineering

Advanced College of Engineering and Management (ACEM)

Kupondole,

Lalitpur Nepal

Example 7: Acknowledgement

ACKNOWLEDGEMENT

We take this opportunity to express my deepest and sincere gratitude to our supervisor <Supervisor's Name>, <Post>, <Department, Office or Institute> for his/her insightful advice, motivating suggestions, invaluable guidance, help and support in successful completion of this project and also for his/her constant encouragement and advice throughout our Bachelors programme.

We express our deep gratitude to <Other Name(s)>, <Post>, <Department, Office or Institute> for his/her/their regular support, co-operation, and co-ordination.

The in-time facilities provided by the department throughout the Bachelors program are also equally acknowledgeable.

We would like to convey our thanks to the teaching and non teaching staff of the Department of Electronics & Communication and Computer Engineering, acem for their invaluable help and support throughout the period of Bachelors Degree. We are also grateful to all our classmates for their help, encouragement and invaluable suggestions.

Finally, yet more importantly, I would like to express my deep appreciation to my grandmother, parents, sister and brother for their perpetual support and encouragement throughout the Bachelors degree period.

<Student's Name> <Roll No.>

<Student's Name> <Roll No.>

<Student's Name> <Roll No.>

<Student's Name> <Roll No.>

Example 8: Abstract

(A sample for “DIAGNOSIS OF ABNORMAL MAMMOGRAPHIC IMAGES USING MULTISTAGE CLASSIFIER”)

ABSTRACT

The term mammographic image refers to the digital X-ray image of human breast, more commonly female breast taken to experiment cancer on it. Breast cancer is a tumor that starts from breast tissue and it has become a most common mortality factor for women in the world. Even at this 21st century, there is no reliable way for breast cancer treatment. This is why early detection of breast cancer is needed so that the patients can find the better options for medical treatment in early stages itself. Hence, we need a system that can decide whether you have cancer or not, if it is cancer which type of cancer do you have and in which stage the cancer is so that it will be easier for both patients and radiologists to have better care of it. And this project aims at the classification of such images with high success rate to diagnose the breast cancer. A cascaded three-stage neural network is designed for the classification purpose with a Radial Basis Function Network in each of the stages. The first stage classifies a given mammographic image into cancerous or non-cancerous also called as Abnormal or Normal. The second stage classifies an abnormal mammographic image into one of the six cancer types based on the shape and irregularities in tumor. The third stage diagnoses the severity stage of one particular cancer type decided by second stage. The various features like texture features based on gray level cooccurrence matrix, frequency domain features, statistical features, and discrete laplacian sum are used for the classification purposes in each of the three stages. The system is trained and tested with image samples provided by mammographic image analysis society and compared with the existing system. The success rate for the classification of cancer types is observed to be 85% against 81% of the existing one (with four cancer types). The overall classification rate is observed to be 89.5% which is comparable with all the existing systems.

Example 9: Table of Contents

TABLE OF CONTENTS

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6 Implementation Details	
7 Result and Analysis	
8 Conclusion and Future Work	
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Example 10: List of Tables (SIMILAR TO LIST OF FIGURES)

Example 11: List of Figures

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Example 12: List of Symbols and Acronyms

LIST OF SYMBOLS AND ACRONYMS

Notation	Description
CALC	Calcification
CIRC	Circumscribed Masses
ARCH	Architectural Distortion
SPIC	Spiculated Distortion
ASYM	Asymmetric Distortion
MISC	Miscellaneous
RBF	Radial Basis Function
GLCM	Gray Level Co-occurrence Matrix
MIAS	Mammography Image Analysis Society
CAD	Computer Aided Diagnosis
MRI	Magnetic Resonance Images
PET	Positron Emission Tomography
NMI	Normal Mammographic Image
AMI	Abnormal Mammographic Image
ANN	Artificial Neural Network
FFNN	Feed forward Neural Network
MLPNN	Multi-layer Perceptron Neural network
BPNN	Back Propagation Neural Network
PNN	Probabilistic Neural Network
GRNN	General Regression Neural Network
SVM	Support Vector Machine
SOM	Self Organizing Map
WDBC	Wisconsin Diagnostic Breast Cancer
LPT	Log Polar Transformation

Example 12: References

Here are few examples for reference.

Book

- [1] B. Klaus and P. Horn, Robot Vision. Cambridge, MA: MIT Press, 1986.
- [2] L. Stein, "Random patterns," in Computers and You, J. S. Brake, Ed. New York: Wiley, 1994, pp. 55-70.
- [3] R. L. Myer, "Parametric oscillators and nonlinear materials," in Nonlinear Optics, vol. 4, P. G. Harper and B. S. Wherret, Eds. San Francisco, CA: Academic, 1977, pp. 47-160.
- [4] M. Abramowitz and I. A. Stegun, Eds., Handbook of Mathematical Functions (Applied Mathematics Series 55). Washington, DC: NBS, 1964, pp. 32-33.
- [5] E. F. Moore, "Gedanken-experiments on sequential machines," in Automata Studies (Ann. of Mathematical Studies, no. 1), C. E. Shannon and J. McCarthy, Eds. Princeton, NJ: Princeton Univ. Press, 1965, pp. 129-153.
- [6] Westinghouse Electric Corporation (Staff of Technology and Science, Aerospace Div.), Integrated Electronic Systems. Englewood Cliffs, NJ: Prentice-Hall, 1970.
- [7] M. Gorkii, "Optimal design," Dokl. Akad. Nauk SSSR, vol. 12, pp. 111-122, 1961 (Transl.: in L. Pontryagin, Ed., The Mathematical Theory of Optimal Processes. New York: Interscience, 1962, ch. 2, sec. 3, pp. 127-135).
- [8] G. O. Young, "Synthetic structure of industrial plastics," in Plastics, vol. 3, Polymers of Hexadromicon, J. Peters, Ed., 2nd ed. New York: McGraw-Hill, 1964, pp. 15-64.

Handbook

Basic Format:

- [1] Name of Manual/Handbook, x ed., Abbrev. Name of Co., City of Co., Abbrev. State, year, pp. xx-xx

Examples:

- [1] Transmission Systems for Communications, 3rd ed., Western Electric Co., Winston-Salem, NC, 1985, pp. 44-60.
- [2] Motorola Semiconductor Data Manual, Motorola Semiconductor Products Inc., Phoenix, AZ, 1989.
- [3] RCA Receiving Tube Manual, Radio Corp. of America, Electronic Components and Devices, Harrison, NJ, Tech. Ser. RC-23, 1992.

Reports

Basic Format:

- [1] J. K. Author, "Title of report," Abbrev. Name of Co., City of Co., Abbrev. State, Rep. xxx, year.

Examples:

- [1] E. E. Reber absorption in the earth's atmosphere," Aerospace Corp., Los Angeles, CA, Tech. Rep. TR-0200 (4230-46)-3, Nov. 1988.
- [2] J. H. Davis and J. R. Cogdell, "Calibration program for the 16-foot antenna," Elect. Eng. Res. Lab., Univ. Texas, Austin, Tech. Memo. NGL-006-69-3, Nov. 15, 1987.
- [3] R. E. Haskell and C. T. Case, "Transient signal propagation in lossless isotropic plasmas," USAF Cambridge Res. Labs., Cambridge, MA, Rep. ARCRL-66-234 (II), 1994, vol. 2.
- [4] M. A. Brusberg and E. N. Clark, "Installation, operation, and data evaluation of an oblique-incidence ionosphere sounder system," in "Radio Propagation Characteristics of the Washington-Honolulu Path," Stanford Res. Inst., Stanford, CA, Contract NOBSR-87615, Final Rep., Feb. 1995, vol. 1.
- [5] P. Diamant and W. L. Lupatkin, "V-line surface-wave radiation and scanning," Dept. Elect. Eng., New York, Sci. Rep. 85, Aug. 1991.

WWW

Basic Format:

- [1] J. K. Author. (year, month day). Title (edition) [Type of medium]. Available: [\(http://www.\(URL\)\)](http://www.(URL)) (Referred on: date)

Example:

- [1] J. Jones. (1991, May 10). Networks (2nd ed.) [Online]. Available: <http://www.atm.com> (Referred on: March 12, 2013)

Major project mid-term report format

Cover page

Title page

Acknowledgement

Abstract

Table of contents

List of figures, tables, symbols (if applicable)

Main body

Chapter 1: Introduction:

Background introduction

Other related topics or terms that need to be introduced

Motivation

Problem definition

Goals and objectives

Scope and applications

Report organization: brief introduction of all the chapters

Chapter 2: Literature review

Chapter 3: Requirement analysis

Project requirements (hardware and software)

Feasibility study

Chapter 4: System design and architecture

System architecture or block or circuit diagram

ER, DFD, other diagrams (if applicable)

Chapter 5: Methodology (4 & 5 may be combined together in few projects)

Chapter 6: Work done and work to be done

Chapter 7: Implementation, Partial result and analysis (if applicable)

Chapter 8: Future enhancements and Conclusion

Appendix (if applicable)

References

For more detail you may refer the main report writing guidelines from our college website.