Title of Capstone Project

by

First Author (243014001)

Project/Thesis report (CSE499) submitted in partial fulfillment of the requirements for the degree of

Bachelor of Science in Computer Science and Engineering

Under the supervision of

Supervisor's Name

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

UNIVERSITY OF LIBERAL ARTS BANGLADESH

FALL 2022

DECLARATION

Project Title   Title of Capstone Project
Authors   *First Author*
Student IDs   243014001
Supervisor   Supervisor's Name

We declare that this project/thesis report entitled *Title of Capstone Project* is the result of our own work except as cited in the references. The project/thesis report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

First Author
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Department of Computer Science and Engineering
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Date: February 02, 2023

CERTIFICATE

This is to certify that the project/thesis report entitled **Title of Capstone Project**, submitted by **First Author** (Student ID: 243014001) is a undergraduate student of the **Department of Computer Science and Engineering** has been examined. Upon recommendation by the examination committee, we hereby accord our approval of it as the presented work and submitted report fulfill the requirements for its acceptance in partial fulfillment for the degree of *Bachelor of Science in Computer Science and Engineering*.

Supervisor's Name, Supervisor's Position
Dept. of CSE, University of Liberal Arts Bangladesh

Name of the 1st Examiner, Designation
Dept. of CSE, University of Liberal Arts Bangladesh

Name of the 2nd Examiner, Designation
Dept. of CSE, University of Liberal Arts Bangladesh

Name of the 3rd Examiner, Designation
Dept. of CSE, University of Liberal Arts Bangladesh

Place: Dhaka
Date: February 02, 2023

ACKNOWLEDGEMENTS

Dedicated to
my loving Mother
– First Author

ABSTRACT

Summarize the rationale for your project, the methodology, anticipated results, and conclusions you will draw from your work. (roughly 300 words)

Keywords: keyword1, keyword2

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Chapter 1

Introduction

1.1 Problem statement

State the problem to be solved as indicated by the need (Supervisor, industry sponsor, or self-proposed). Present the objectives and expectations of the need and constraints given to the problem Krizhevsky et al. (2012).

1.2 Aims, objectives and Motivation

(Objectives must be identified and written in bullet points and motivation < 150 words)

1.2.1 Aims

1.2.2 Objective

1.2.3 Motivation

1.3 Project Specification

- Give a clear set of design specifications for the project. The design specifications should be clear concise statements with a specific metric and an appropriate value.

- The specifications should provide a specific measure of the success of the final design in meeting the need and constraints associated with the design problem.

- Problem Requirements Specifications is a dynamic process. Although it is desirable to freeze a set of requirements permanently, it is rarely possible. Requirements are likely to evolve through an iterative process that involves communication between customers specifying the need and the technical community. The impact of proposed requirements must be evaluated to ensure that the initial intent of the requirements baseline is maintained or that changes to the intent are understood and accepted by the customer.

Chapter 2

Literature Review

Relevant to your chosen topic, including citations. Give a brief summary of the key literature that has been researched and used in the design effort. This includes textbooks, handbooks, technical papers, reports, web sources, codes, and regulations. A summary of similar designs, processes, or techniques can also be discussed to show the strengths and weaknesses of your design compared to others. Indicate whenever the design process was supported by previous coursework.

Chapter 3

Methodology

- Concept Generation: Show that design methods were used to generate several conceptual solutions to the design problem. Draw sketches or tree diagrams to describe the alternatives that were produced by this effort.

- Concept Reduction: Show that a judicial decision-making process was used to reduce the number of possible conceptual solutions to a single (optimal) solution that is to be implemented and verified and/or validated by the end of the project. Discuss why alternative solutions were rejected/chosen over other solutions. Describe the criteria used to evaluate potential solutions. Substantiate that the proposed final concept is the optimal choice in providing the functionality necessary while best meeting the specified constraints of the design problem. Document in detail the decision-making process.

- Justification and novelty – 'what is new' (< 50 words)

Chapter 4

Design and Development

- Present and discuss the proposed design concepts which have been used to solve the design problem. Although this section should be supported by a text discussion it should be strongly supported by a detailed solid model and engineering analysis and design methods. Be sure to discuss the major subsystems in the design and the purpose and features of each subsystem.

- Thoroughly present and discuss all engineering analysis used in the design process. Present all formulations, assumptions, and parameters used. Show results of the analysis. The discussion must be clear enough for reviewing the process as well as repeating the design. You should be able to prove that the design will not fail and will perform as required solely through analysis.

Chapter 5

Result analysis

You will discuss the results of your experiments/critically analyze the performance of your developed system. You are also compare the results/performance with those of the existings.

Chapter 6

Conclusions

6.1 Social, Legal, Ethical, and Environmental Issues

It is the ethical responsibility of the engineer to ensure that the solution to the design problem is safe to the public and the environment. This is substantiated by showing that Design for Safety methods was employed in the design process and documented through a Hazards and Failure Analysis. Discuss the results of the analysis and how the safety was incorporated into the design. Also, whether the product addresses local/international legal requirements needs to be described.

6.2 Brief Summary

Give a brief summary of the expected project's outcomes, what to be accomplished etc.

6.3 Future works

References

Krizhevsky, A., Sutskever, I., & Hinton, G. E. (2012). Imagenet classification with deep convolutional neural networks. *Advances in neural information processing systems*, *25*, 1097–1105.

Appendices (Optional)

Include in the appendices information that could not be included in the formal body of the report because it would disrupt the continuity of the discussion. Background materials, product catalogs, experimental data tables, and extra documentation should be placed in the appendix.