A Comparative Study on XXXXXXXX Using Deep Learning Techniques (Thesis Title)

This thesis is submitted in partial fulfillment of the

requirements for the degree

of

Bachelor of Science in Computer Science and Engineering

By

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Month, Year

KNOWLEDGE & TECHNOLOGY

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CERTIFICATE

This is to certify that the thesis entitled **"A Comparative Study on XXXXXXXX Using Deep Learning Techniques (Thesis Title)"** by **"Mr. XYZ", ID No.: 19……, Session: 20..-20.., "Mr. XYZ", ID No.: 19……, Session: 20..-20.., "Mr. XYZ", ID No.: 19……, Session: 20..-20..** has been accepted as satisfactory in partial fulfilment of the requirement for the degree of Bachelor of Science in Computer Science and Engineering on **Month, Year.**

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DECLARATION

I/We hereby declare that my/our thesis entitled **"A Comparative Study on XXXXXXXX Using Deep Learning Techniques (Thesis Title)"** is the result of my/our work. I/We also ensure that it was not previously submitted or published elsewhere for the award of any degree or diploma.

The work has been accepted for the degree of Bachelor of Science in Computer Science and Engineering at Bangladesh Army University of Engineering & Technology (BAUET).

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ABSTRACT

Achieving versatile dispersion of nanoparticles in a broad range of solvents (e.g., water, oil, and biofluids) without repeatedly recourse to chemical modifications are desirable in optoelectronic devices, self-assembly, sensing, and biomedical fields. However, such a target is limited by the strategies used to decorate nanoparticle's surface properties, leading to a narrow range of solvents for existing nanoparticles. Here we report a concept to break the nanoparticle's dispersible limit via electrochemically anchoring surface ligands capable of sensing the surrounding liquid medium and rotating to adapt to it, immediately forming stable dispersions in a wide range of solvents (polar and nonpolar, biofluids, etc.). Moreover, the smart nanoparticles can be continuously electrodeposited in the electrolyte, overcoming the electrode surface-confined low throughput limitation of conventional electrodeposition methods. The anomalous dispersive property of the smart Ag nanoparticles enables them to resist bacteria secreted species-induced aggregation and the structural similarity of the surface ligands to that of the bacterial membrane assists them to enter the bacteria, leading to high antibacterial activity. The simple but massive fabrication process and the enhanced dispersion properties offer great application opportunities to the smart nanoparticles in diverse fields.

N.B.: An abstract is a short summary of your (published or unpublished) thesis paper, usually about a paragraph containing 250-300 words.

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List of Figures

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Abbreviations and List of Symbols

AI	Artificial Intelligence
CNN	Convolutional Neural Network
FAQs	Frequently Asked Questions
E-commerce	Electronic commerce
ROC	Receiver Operating Characteristic
VGG	Visual Geometry Group
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheets

Additional Instructions

1. In each page, margin should be as follows-
   Left = 1.18", Right = 1", Top = 1", Bottom = 1"

2. In each paragraph, line spacing should be 1.5 lines.

3. Chapter number and Chapter heading should be (times new roman, 16 pt, bold, 1.5 line spacing). Example:

Chapter 1

Introduction

4. Section heading should be (13 pt, times new roman, bold)
   Example:

   1.1 Introduction
   1.2 Objectives

5. Subsection heading should be (12 pt, times new roman, normal)
   Example:

   1.2.1 Overall Objectives
   1.2.2 Specific Objectives

6. All the text should be (times new roman, 12 font, normal, line space 1.5 lines)

7. Figure and equation should be inserted within the text where the figure described. The caption location and number should be as follows-
   Example:

Figure 3.2: Logo of Bangladesh Army University of Engineering & Technology.
(Figure 3.2 means 2nd figure in chapter 3)

$$a - 2b + c = 5 \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots \quad (2.1)$$

(Equation 2.1 means 1st equation in chapter 2)

8. Table should be inserted in the text where it is described. The caption location and number should be as follows-
   Example:

Table 3.4: Population Growth Rate of Bangladesh

Year	2000	2005	2007	2009	2012	2014
Growth Rate	1%	1.5%	1.6%	1.4%	1.3%	1.2%

Or

Year	Growth Rate
2000	1%
2005	1.5%
2007	1.6%
2009	1.4%
2012	1.3%
2014	1.2%

(Table 3.4 means 4th table in chapter 3)

9. The regular page number should start from chapter 1 and insert at the bottom of the pages centered plain number (1, 2, 3 etc). The first few pages before start the chapter 1 will be numbered as (ii, iii, etc).

10. When citing references in the text, use "[ ]" and put the number in the bracket that you have put in the reference list at the end of your report.

11. Appendix should put at the end of the report numbered as A, B, C.....

12. Make the reference list according to the sequence that you have used in the text. The styles of the references will be followed by IEEE.

Chapter 1
Introduction

1.1 Introduction

Agriculture faces many challenges, including climate change, limited resources, and crop diseases. Crop diseases are a significant threat to agriculture, leading to significant losses in yield and quality. Traditional methods of detecting and diagnosing crop diseases can be time-consuming and inaccurate. Farmers often rely on their experience and knowledge to identify and manage diseases, which can lead to misdiagnosis and ineffective treatments. This is where artificial intelligence (AI) can play a critical role in agriculture [1].

We are working on a project which is currently very important in the agriculture sector and our project is currently our website with various agriculture information in the agriculture sector. Moreover, from this website, we can learn about the machinery used in any agricultural work. Nowadays, many people do not know about the agricultural machinery used in this agrarian work [2]. Through our website, people can know which digital equipment is used in this farming and in which field and about that equipment. Moreover, much more accurate information about agriculture can be easily obtained from this website by agricultural people. Nowadays we can complete our work in a very short time with the help of digital machinery used in the agriculture sector. It will waste our time. So, we can say that through our website people will know about digital machinery and get more information about agriculture and our website will play a lot of role in the agriculture sector today.

1.2 Motivation

It may be difficult for traditional farmers to acquire real-time data and analytics, which makes decisions about crop management, disease control, and market demand difficult. Our website is user-friendly for the development of agriculture since, despite the fact that there are other websites devoted to agriculture, they offer very few features and information that are insufficient for farmers. Our website has many features such as AI-based agriculture diseases predictions and treatment of crops [3], online buy seeds, rent instruments, comments, digital tools in agriculture, search for workers, and information about crops seeds.