**TITLE OF THE THESIS**

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By

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B. Sc. Engineering in Computer Science and Engineering



**Department of Computer Science and Engineering**

Faculty of Electrical and Computer Engineering

Bangladesh Army University of Science and Technology (BAUST)

AUGUST 2022

**Title of the Thesis**

**Title of the Thesis**

This thesis is submitted in partial fulfillment of the requirement for the degree of B.Sc. Engineering in Computer Science and Engineering.

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Saidpur Cantonment, Nilphamari, Bangladesh.

The thesis titled **“Name of the thesis Title”** submitted by ID. XXXXX, Session 20XX-20XX has been presented on “dd/mm/yyyy” and accepted as satisfactory in fulfillment of the requirement for the degree of Bachelor of Science in Computer Science & Engineering (CSE) as B.Sc. Engineering to be awarded by the Bangladesh Army University of Science & Technology (BAUST).

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# CANDIDATE’S DECLARATION

It is hereby declared that the contents of this project are original and any part of it has not been submitted elsewhere for the award if any degree or diploma.

|  |  |  |  |
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# ABSTRACT

*(250-500 words; 1 page)*

In the DCT compressed scheme, to achieve more compression ratio, images are coarsely quantized. So, in case low bit rate, block boundaries become visible in the reconstructed image which degrades the visual quality of the image is known as blocking artifact. Various pre-processing and post-processing methods to remove the blocking artifacts are proposed by different authors. Here, we represent a new de-blocking method that combines the improved Canny edge detection and adaptive filtering technique. The method is compared to other methods for numerous image samples for varying quality factors. It achieves satisfactory result in objective and subjective measurements.

**Keywords:** Blocking artifact, Canny Edge Detection, De-blocking, Adaptive filtering.

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# CHAPTER 1

# Introduction

### Overview

The information contained in this bulletin is intended to provide guidance to those who are concerned with undergraduate studies in ICT Engineering. No responsibility will be borne by the Department of ICT and/or the Bangladesh Army University of Science and Technology (BAUST) if any inconvenience or expenditure is caused because of the information of this bulletin. Also, the information contained in it is subject to change at any time without any prior notification.

### Background and Present State

### Problem Statement

### Objectives

### Scopes and limitations

### Organization of the Report

## Table 1.1: Fitting correlation coefficient R2 of models.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Drug carrier |  | Zero-order dynamic model | First-order kinetic model | Baker-Lons dale model | Korsmeyer-Peppas model |
| MAG | pH=1.2 | 0.3219 | 0.3382 | 0.3775 | 0.8686 |
| pH=7.4 | 0.4013 | 0.4216 | 0.4821 | 0.9038 |
| CTAB-MAG | pH=1.2 | 0.4774 | 0.5327 | 0.5997 | 0.9232 |
| pH=7.4 | 0.4752 | 0.5226 | 0.5971 | 0.9235 |
| MAG-Fe3O4 | pH=1.2 | 0.4495 | 0.5046 | 0.5680 | 0.9129 |
| pH=7.4 | 0.4744 | 0.5235 | 0.5944 | 0.9240 |

### Summary

# CHAPTER 2

# Literature Review

### Overview

### Image Compression

MosqBox14.tif

## Figure 2.1: Artificial neural network.

### Classification of Image Compression Technique

### Image Compression Model

### Principles of DCT-Based Coding

### Blocking Artifact of Compressed Image

### Open Issues

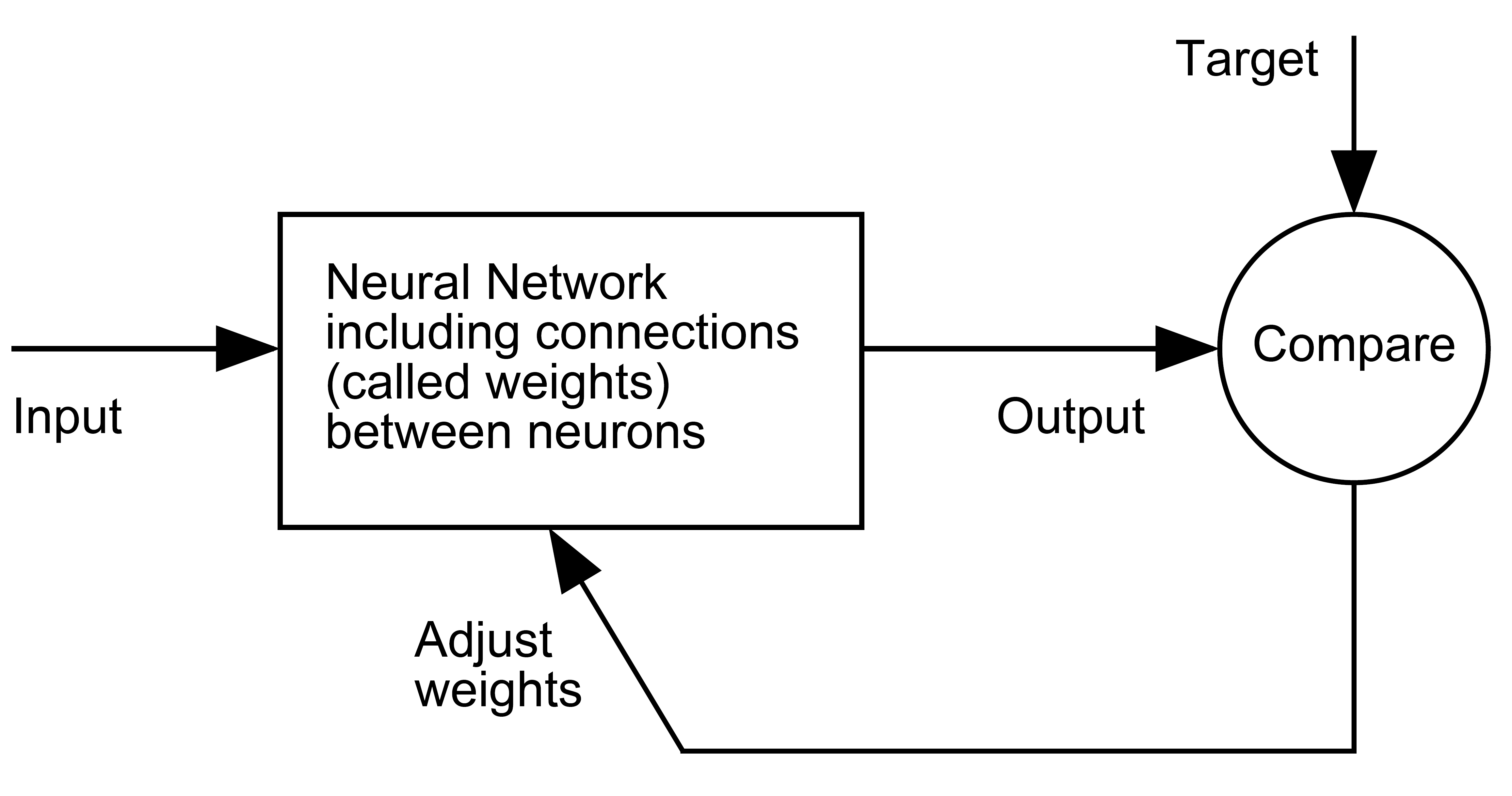
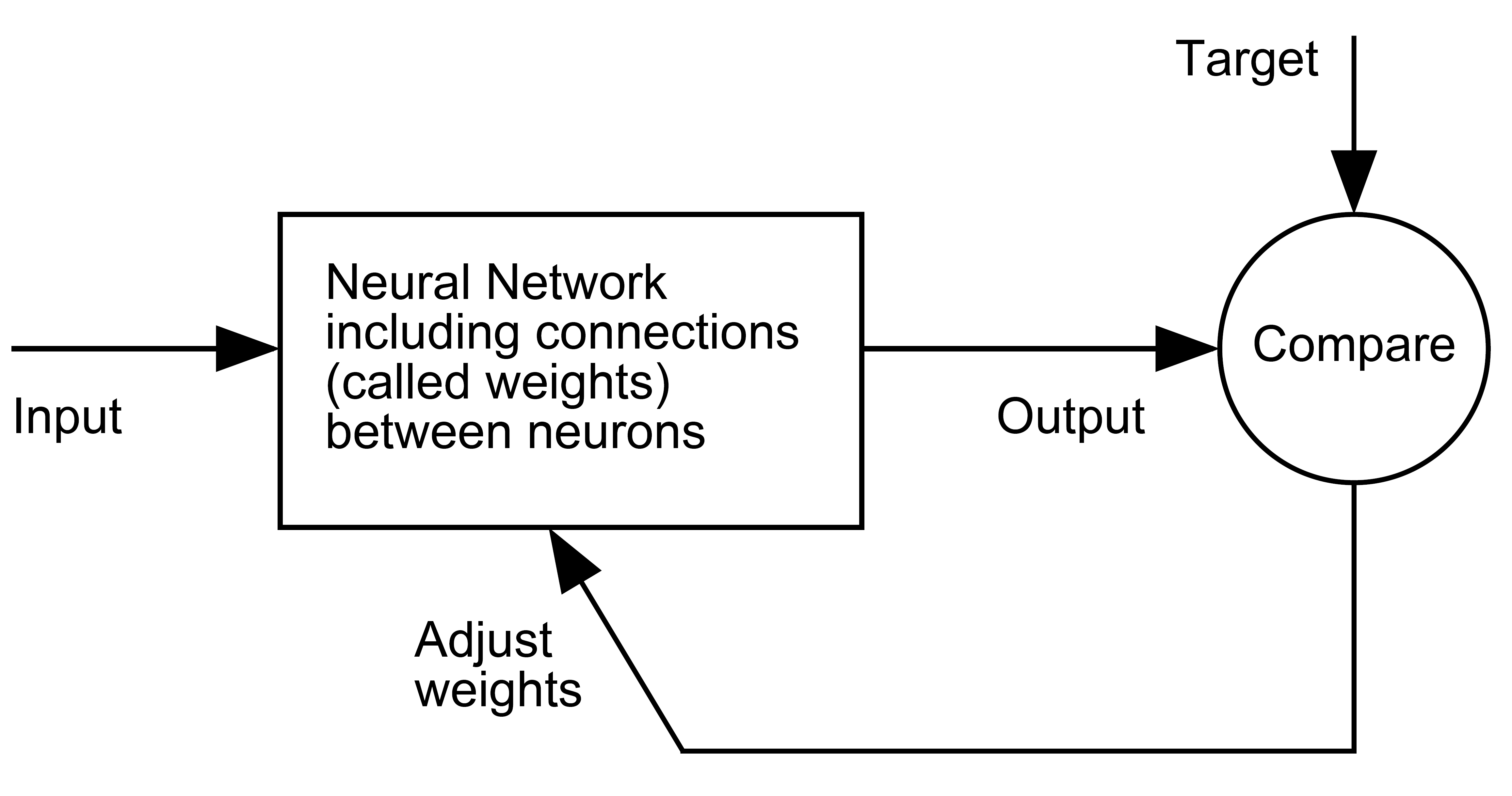
### Summary

# CHAPTER 3

# Methodology

### Overview

### Proposed Methodology

** **

1. (b)

## Figure 3.1: (a) Neural network, and (b) Artificial neural network.

### XXXXXX

### XXXXXX

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### Summary

# CHAPTER 4

# Implementation

### Overview

### XXXXX

#### 4.2.1 Information contained

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### XXXXX

### Summary

# CHAPTER 5

# Results and Analysis

### Overview

### XXXXXX

MosqBox14.tif MosqBox14.tif MosqBox14.tif

(a) (b) (c)

## Figure 5.1: Original image of (a) 1\*X zoom, (b) tracking, and (c) 2\*X zoom.

### Experimental/Simulation Results

## Table 5.1: Fitting correlation coefficient R2 of models.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Drug carrier |  | Zero-order dynamic model | First-order kinetic model | Baker-Lons dale model | Korsmeyer-Peppas model |
| MAG | pH=1.2 | 0.3219 | 0.3382 | 0.3775 | 0.8686 |
| pH=7.4 | 0.4013 | 0.4216 | 0.4821 | 0.9038 |
| CTAB-MAG | pH=1.2 | 0.4774 | 0.5327 | 0.5997 | 0.9232 |
| pH=7.4 | 0.4752 | 0.5226 | 0.5971 | 0.9235 |
| MAG-Fe3O4 | pH=1.2 | 0.4495 | 0.5046 | 0.5680 | 0.9129 |
| pH=7.4 | 0.4744 | 0.5235 | 0.5944 | 0.9240 |
| CTAB-Fe3O4 | pH=1.2 | 0.4617 | 0.5214 | 0.5802 | 0.9186 |
| pH=7.4 | 0.4268 | 0.4759 | 0.5430 | 0.9065 |

### Performance/Comparative Analysis

### Summary

# CHAPTER 6

# Conclusions and Future Work

### Conclusions

### Future Recommendation

### Limitations/Conflict of Interests

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# APPENDIX A

Place your source code here (if needed)/others, etc.

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