UNIVERSITY TEKNOLOGI MARA

# LUMPY SKIN DISEASE (LSD) IN BOVINE DETECTION USING CONVOLUTIONAL NEURAL NETWORK

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#### ABSTRACT

Lumpy Skin Disease (LSD) is a serious viral infection that affects cattle and water buffalo, leading to major financial losses in the livestock industry. This study focuses on creating a tool to help detect LSD using a computer system that analyses images. The aim is to make it easier and faster for farmers and veterinarians to identify infected animals and take action. The project follows a clear process that includes collecting images of cattle, improving the quality of these images, and building a disease detection prototype that can recognize signs of the disease. The prototype uses a method called Convolutional Neural Network (CNN) to analyse the images. The design of the system was guided by information from existing studies and tested carefully to ensure it works well. The results show that the tool can accurately identify LSD from images of cattle, making it a useful option for farmers and veterinarians. Testing shows the system is reliable and performs well in real-life situations as the accuracy rate had reached approximately 83%. In conclusion, this study provides an easy-to-use tool for detecting LSD, showing how technology can help improve animal care. Future improvements should include expanding the dataset to incorporate images of buffalo and goats to enhance the model's generalization capability.

## **TABLE OF CONTENTS**

CON	ΓΕΝΤ	PAGE
SUPEI	RVISOR APPROVAL	iii
STUD	ENT DECLARATION	iv
ACKN	OWLEDGEMENT	V
ABSTI	RACT	vi
TABL	E OF CONTENTS	vii
LIST (	<b>DF FIGURES</b>	х
LIST (	OF TABLES	xi
LIST OF ABBREVIATIONS		xii
СНАР	TER 1	1
1.1	Background Study	1
1.2	Problem Statement	2
1.3	Objectives	3
1.4	Project Scopes	3
1.5	Project Significance	4
1.6	Overview of Research Framework	6
1.7	Gantt Chart	7
1.8	Conclusion	8
СНАР	TER 2	9
2.1 Introduction		9
2.2 Image Classification		9
2.3 Lumpy Skin Disease		11
2.4 Convolutional Neural Network		12

2.4.1 What is CNN and How Does it Works	12
2.4.2 Advantages and Disadvantages of Convolutional Neural Network	13
2.4.3 Overview of Convolutional Neural Network	14
2.5 Implementation of Convolutional Neural Network in Various Problems	16
2.6 Similar Applications	23
2.7 The Implications of Literature Review	30
2.8 Conclusion	31
CHAPTER 3	
3.1 Overview of Research Framework	32
3.1.1 Detailed of Research Framework	33
3.2 Preliminary Phase	35
3.2.1 Literature Study	35
3.2.2 Data Pre-processing	36
3.3 Design and Implementation Phase	39
3.3.1 System Architecture	39
3.3.2 Pseudocode	41
3.3.3 Flowchart	43
3.3.4 User Interface	45
3.3.5 Prototype Implementation	46
3.4 Evaluation	47
3.5 Conclusion	50
CHAPTER 4	51
4.1 Project Logical Design	51
4.2 Program Codes for Algorithm	53
4.2.1 Parameter Setup and Dataset Directory for Image Processing	53
4.2.2 Loading and Splitting Datasets for Training and Validation	54
4.2.3 Data Augmentation and Normalization Setup	55