Universiti Teknologi MARA

Bird Species Classification Based on Image Using Convolutional Neural Network

ADAM IZZAT BIN AZMI

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ABSTRACT

For numerous people nowadays, determining the species of birds and classifying them is getting challenging. To reliably describe bird species without relying on human labour, research has been done in this area. To identify and categorise bird species using digital images of their forms, colours, and patterns is the goal of this research. As part of the approach used in this project, a dataset of bird photos was gathered, the data was processed, and a Convolutional Neural Network model was trained to accurately identify and categorise the species of birds. The results of this study show the value of employing Convolutional Neural Network to identify birds because they successfully categorise birds in a variety of contexts with high accuracy rates. The actual work done includes data collecting from the Kaggle dataset, Convolutional Neural Network implementation, training the model, and performance evaluation. The acquired results demonstrate the potential of CNNs-based bird species categorization systems in raising interest in learning and increasing the success rate of monitoring bird populations. By offering fresh perspectives and approaches to the classification of bird species, this research advances the subject and creates new opportunities for global improvements in the study of animals. Finally, it is envisaged that the classification of bird species based on an image system will aid in expanding our understanding of and research into bird species, particularly in Malaysia.

TABLE OF CONTENTS

CONTENT **PAGE**

ACKNOWLEDGEMENT v
ABSTRACT vi
TABLE OF CONTENTS i
LIST OF FIGURES iv
LIST OF TABLES vi

CHAPTER ONE: INTRODUCTION 1

1.1 Background of Study 1
1.2 Problem Statement 5
1.3 Objective 8
1.4 Scope 8
1.5 Project Significance 9
1.6 Overview of Research Framework 11
1.7 Conclusion 12

CHAPTER TWO: LITERATURE REVIEW 13

2.1 Bird Species Classification Based on Image 13
2.2 Deep Learning 14
2.2.1 Applications of Deep Learning in Image Recognition 15
2.3 Convolutional Neural Network Algorithm 16
2.3.1 CNNs and The Way It Work 16
2.3.2 Types of Convolutional Neural Network 17

2.3.3 Advantages and Disadvantages of Convolutional Neural Network 19

2.4 Implementation of Convolutional Neural Network Algorithm in Various Problem 24

2.5 Similar Works 32

2.6 The Implication of Literature Review 37

2.7 Conclusion 39

CHAPTER THREE: METHODOLOGY 40

3.1 Overview of Research Methodology 40

3.1.1 Detailed of Research Framework 40

3.2 Preliminary Study 45

3.2.1 Literature Study 46

3.3 Requirement Analysis 46

3.4 Data Finding 47

3.4.1 Data Description 48

3.4.2 Image Pre-processing 50

3.5 Development 52

3.5.1 Design 53

3.5.1.1 Prototype Architecture 53

3.5.1.2 System Flowchart 54

3.5.1.3 Interface Design 56

3.5.1.4 Pseudocode 58

3.5.1.5 Hardware Requirements 59

3.5.1.6 Software Requirements 60

3.6 Evaluation 61

3.6.1 Confusion Matrices 61

3.6.2 Accuracy Algorithm 63

3.7 Documentation 65

3.7.1 Gantt Chart 66

3.8 Conclusion 67