

TABLE OF CONTENTS

	Page
LIST OF FIGURES	vi
ABSTRACT	vii
CHAPTER 1 INTRODUCTION.....	1
1.1. INTRODUCTION.....	2
1.2. SCOPE.....	2
1.3. NOVELTY OF IDEA.....	3
CHAPTER 2 PROBLEM DEFINITION	6
CHAPTER 3 LITERATURE SURVEY.....	9
CHAPTER 4 PROJECT DESCRIPTION.....	15
4.1. SYSTEM DESIGN	17
CHAPTER 5 REQUIREMENTS	22
5.1. FUNCTIONAL REQUIREMENTS	23
5.2. NON-FUNCTIONAL REQUIREMENTS	23
5.3. HARDWARE REQUIREMENTS.....	23
5.4. SOFTWARE REQUIREMENTS.....	24
CHAPTER 6 METHODOLOGY.....	25
CHAPTER 7 EXPERIMENTATION.....	34
CHAPTER 8 TESTING AND RESULTS	37
8.1 RESULTS	37
CHAPTER 9 CONCLUSION AND FUTURE WORK	
10.1. CONCLUSION.....	42
10.1. SCOPE FOR FUTUREWORK	42
CHAPTER 10	
REFERENCES... ..	44
SAMPLE CODE	46

LIST OF FIGURES

Fig. No.	Description of the figure	Page No.
4.1.2(a)	<i>CNN representation of Image feature extraction</i>	18
4.1.2(b)	<i>ResNet50 Model Architecture</i>	19
4.1.3(a)	<i>Simple representation of RNN</i>	19
4.1.3(b)	<i>LSTM Architecture</i>	20
4.1.4	<i>Model for Training and Testing</i>	20
4.2.1	<i>Architecture used for Emotion Detection</i>	21
6.1	<i>Data Flow of The Model</i>	29
7.2	<i>Predicted Results</i>	35
8.1	<i>Result Prediction of Image Captioning</i>	38
8.2	<i>Result predicted for Emotion Detection</i>	39
8.3	<i>Conversion images of 2D images to 3D models</i>	40

ABSTRACT

We have taken up Image Captioning using Deep Learning since we can explore multiple applications of Computer Vision. This involves Deep Learning algorithms such as Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN) which are used for image feature extraction and Natural Language Processing respectively. This project has many real-world applications, and we can use this model as a steppingstone to explore other applications using Computer Vision. We can expect a minimum accuracy of the captions generated of an image to be 70% and can work on the model to increase its accuracy to a higher extent.