"OPINION MINING / SENTIMENT ANALYSIS"

Submitted to the

Department of MCA

In partial fulfillment of the

DUAL DEGREE MASTER OF COMPUTER APPLICATIONS

Under the guidance of

Ms. Sona Maria Sebastian

Research Report Done by

LIYA MATHEW
(Reg No: 100041)

DEPARTMENT OF MCA

AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY

May 2019

AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY

BONAFIDE CERTIFICATE

Certified that the Project Work entitled

"OPINION MINING / SENTIMENT ANALYSIS"

is a bonafide work done by

LIYA MATHEW

In partial fulfillment of the requirement for the Award of

DUAL DEGREE MASTER OF COMPUTER APPLICATIONS

Degree From

Mahatma Gandhi University, Kottayam

(2014-2019)

Head of Department *Research Guide*

Submitted for the Viva-Voce Examination held on……

External Examiner 1 **External Examiner 2**

AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY

CERTIFICATE

This is to certify that the project entitled "**OPINION MINING / SENTIMENT ANALYSIS"** has been successfully carried out by ***LIYA MATHEW*** (Reg. No:100041) in partial fulfilment of the Course **Dual Degree Master of Computer Applications.**

HEAD OF THE DEPARTMENT **RESEARCH GUIDE**

Date:

AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY

DECLARATION

I, **LIYA MATHEW**, hereby declare that the project work entitled **"OPINION MINING / SENTIMENT ANALYSIS"** is an authenticated work carried out by me under the guidance of **Ms. Sona Maria Sebastian** for the partial fulfilment of the course **DUAL DEGREE MASTER OF COMPUTER APPLICATIONS**. This work has not been submitted for similar purpose anywhere else except to **AMAL JYOTHI COLLEGE OF ENGINEERING, KANJIRAPALLY.**

Date: **LIYA MATHEW**

Place:

ABSTRACT

Nowadays, all day-to-day applications are going online. Due to the growth of technologies, people use their smart phones, tablets and laptops for all applications. E-Resort application will help the users to search for a particular resort by location and find the recommended resorts, the location of the resorts and book their rooms based on the availability of the rooms.

The application can display the detail of the resorts like the phone number, current location, the rating of resort by customers and package details. The application also allows users to give review about the resort and the other users will get the resort suggestion based on these review ratings.The system uses **OPINION MINING / SENTIMENT ANALYSIS** methodology in order to achieve desired functionality. Opinion mining for Resort reviews is a web application, which gives review of the feedback that is given by various users. The System takes review of various users, based on the opinion, system will specify whether the posted resort is good, bad, or worst.

We use a database of sentiment based keywords along with positivity or negativity weight in database and then based on these sentiment keywords mined in user review is ranked. Once the user login to the system he views the resorts and gives review about the hotel.It uses a dictionary of words that are categorised as positive, negative or neutral, and a KNN algorithm to calculate sentiment.System will rate the hotel based on the rank of review. This application is useful for those who are going to visit a new place. This application is useful for those who travel often. Using this application User will get to know which resort is best and suitable for them. User can decide which hotel to accommodate before they reach the place.

ACKNOWLEDGEMENT

First and foremost I thank God Almighty for His blessings for this project. I take this opportunity to express my gratitude to all those who have helped me in completing the project successfully.

It has been said that gratitude is the memory of the heart. I wish to express my sincere gratitude to our Manager **Rev. Fr. Dr. Mathew Paikattu** for providing all the infrastructural facilities for us, our Principal **Dr. Z.V. Lakaparampil** for providing good faculty for guidance.

I owe a great depth of gratitude towards our Head of the Department of Computer Applications **Fr. Rubin Thottupuram** and project Guide **Ms. Sona Maria Sebastian** for their proper guidance throughout the project. I also express my gratitude towards the supporting staffs for technical assistance.

I express my graceful thanks to **AES Team** for helping me to complete the project.

I am indebted to my beloved teachers whose cooperation and suggestions throughout the project which helped me a lot. I also thank all my friends and classmates for their interest, dedication and encouragement shown towards the project. I convey hearty thanks to parents for the moral support, suggestion and encouragement to make this venture a success.

LIYA MATHEW

TABLE OF CONTENTS

1.Chapter I……..……...01

1.Introduction…….……....02

1.1 Sentiment Analysis Algorithms…….…….....02

1.2 Types Of Sentiment Analysis……...03

2. Chapter II……...…...……04

2. Literature Review…….……05

2.1 Supervised Learning Approach……...…….05

2.1.1 Decision Tree Classifier…….....05

2.1.2 Linear Classifier……..……...05

2.1.3 Rule Based Classifier……...….....06

2.1.4 Probablistic Classifier…….....06

3. Chapter III..…… …….....08

3.1 Theoretical Background…….……09

3.2 Concepts & Methodology……..….09

3.2.1 K - Nearest Neighbour Classifier……..…….....09

3.2.2 Pseudo - Code For Knn…….……....12

3.2.3 Levenshtien Distance…….……....13

3.2.4 Phrase Analysis…….....13

3.3 Design & Modelling…….……...15

3.3.1 Diagrams……...……15

3.3.2 Table Design……..16

4. Chapter IV……...……18

4. Project Implementation……...…….....19

5. Chapter V…….22

5. Results Of Analytical……..…..……..…….23

6. Chapter VI…….....24

6. Conclusion And Scope For Future Work……..……25

Appendix 1 ……..27

References…….....35

LIST OF TABLES

1. Table 1 tbl_userfeedback……...16

2. Table 2 tbl_registration…….……..……16

3 . Table 3 tbl_addresort…….……17

LIST OF FIGURES

1. Figure 1 Processing in Sentiment Analysis……...03

2. Figure 2 K - NN Classifier Flowchart 1……..……..10

3. Figure 3 Example of K-NN algorithm……..11

4. Figure 4 Opinion Mining/Sentiment Analysis Process……15

5. Figure 5 K-NN Classifier Flowchart 2 ……15

6. Figure 6 Types of Opinion Mining Techniques ……..19

7. Figure 7 Proposed Methodology For Generating Score Of Customer Review Using Opinion Mining……...20

8. Figure 8 Performance Analysis ……23