Bahria University
Discovering Knowledge

FINAL YEAR PROJECT REPORT

OPINION MINING FOR AUTOMATED RESTAURANT REVIEWS RATING

By

ARUBA KIRAN	**(39097)**
ZUNAIRA SALEEM	**(39144)**
MUNIBA HAYAT	**(39128)**
AYESHA MUNIR	**(39098)**

Supervised by

(LUBNA SIDDIQUI)

Bahria University (Karachi Campus)

2018

ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express gratitude to our research supervisor, Miss LUBNA SIDDIQUI for her invaluable advice, guidance and her enormous patience throughout the development of the research.

In addition, we would also like to express our gratitude to our loving parent and friends who had helped and given me encouragement.

OPINION MINING FOR AUTOMATED RESTAURANT REVIEWS RATING

ABSTRACT

The objective of this project is to develop Automated Restaurant Reviews Rating Web Application. This report includes methodology and technique for opinion mining. Shortly, we are working on public opinions by doing several processing of sentiment gathered from different restaurant websites/facebook pages. Finally the end product of the processing and sentiment analysis will be in the form of web application

In recent years, sentiment analysis became a growing trend in research area; social media gets daily bases numbers of reviews by customers of restaurants which are unable to decide whether good or worst by reading all the reviews, so that an automated system is needed to get customer reaction and give feedback as a rating or score. Processing natural language and understanding customer mind is a big challenge. Many techniques has been used in past years but still it's a hot topic due to a single negation word can change the meaning context. We have used supervised leaning approach with negation transformation technique on Facebook live reviews data and achieved good performance other than previous researches.

TABLE OF CONTENTS

DECLARATION		**ii**
APPROVAL FOR SUBMISSION		**iii**
ACKNOWLEDGEMENTS		**v**
ABSTRACT		**vi**
TABLE OF CONTENTS		**vii**
LIST OF TABLES		**x**
LIST OF FIGURES		**xi**
LIST OF SYMBOLS / ABBREVIATIONS		**xii**
LIST OF APPENDICES		**xiii**
CHAPTER		
1	**INTRODUCTION**	**1**
	1.1 Background	1
	1.2 Problem Statements	1
	1.3 Aims and Objectives	2
	1.4 Scope of Project	2
2	**LITERATURE REVIEW**	**3**
	2.1 Support Vector Machine	3
	2.2 Naïve Bayes	3
	2.3 Lexicon Tool	3
	2.4 Aspect-Based Opinion	4
	2.5 Dictionary Based Approach	4
	2.6 Opinion Lexicon Expansion	5
	2.7 Feature-Based Opinion Mining	5

3	**DESIGN AND METHODOLOGY**	**6**
	3.1 Specification and Design	6
	3.1.1 Data flow	6
	3.1.2 ERD (Entity Relationship Diagram)	7
	3.1.3 Use Cases	8
	3.2 Methodology	10
	3.2.1 Data Fetching	10
	3.2.2 Data Cleansing	11
	3.2.3 Dimensionally Data Reduction and splitting	11
	3.2.4 Replacing Negation	11
	3.2.5 Sentiment Analysis	12
	3.2.3.1 Keywords matching with lexicons	12
	3.2.3.2 Dataset	13
4	**IMPLEMRNTATION**	**14**
	4.1 Software Design Consideration	14
	4.2 Tools For Implement the System	14
	4.2.1 C#	14
	4.2.2 ASP.Net	14
	4.2.3 HTML	15
	4.2.4 CSS	15
	4.2.5 Javascript	15
	4.3 Application	15
	4.3.1 Admin Panel	15
	4.3.2 Dashboard	16
	4.3.3 Data Import	16
	4.3.4 Extract Rating	17
	4.3.5 All Restaurant Rating	17
	4.3.6 User Panel	18
	4.3.7 Home Page	18
	4.3.8 Restaurant Page	19
	4.3.9 Find Us Page	19

	4.3.10	Food Category	20
	4.3.11	Footer	20
	4.3.12	Main Page	21
	4.3.13	Restaurant Rating	21
	4.3.14	Main Menu	22
5	**RESULT AND DISCUSSION**		**23**
	5.1 Results		23
	5.1.1	Import from Facebook	23
	5.1.2	Rating Extraction	24
	5.1.3	Reataurant List	25
	5.2 TESTCASES		25
	5.2.1	Test Case: Login Screen	25
	5.2.2	Test Case: Registration form	26
	5.2.3	Test Case: Home Page	26
	5.2.4	Test Case: Search Functionality	27
	5.2.5	Test Case: GUI And Usability	27
6	**CONCLUSION AND RECOMENDATION**		**28**
	REFERENCES		**29**
	APPENDICES		**31**