VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY
Department of Computer Engineering

Project Report on

ASPECT AND REVIEW BASED RECOMMENDATION SYSTEM

In partial fulfillment of the Fourth Year, Bachelor of Engineering (B.E.) Degree in Computer Engineering at the University of Mumbai Academic Year 2017-2018

Submitted by
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Project Mentor
Mrs. Sujata Khedkar

(2017-18)

VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY
Department of Computer Engineering

Certificate

This is to certify that ***Mugdha Govilkar, Tejas Ingale, Mihir Joshi, Abhishek Kuvar*** of Fourth Year Computer Engineering studying under the University of Mumbai have satisfactorily completed the project on "***ASPECT AND REVIEW BASED RECOMMENDATION SYSTEM***" as a part of their coursework of PROJECT-II for Semester-VIII under the guidance of their mentor ***Mrs. Sujata Khedkar*** in the year 2017-2018 .

This thesis/dissertation/project report entitled "***ASPECT AND REVIEW BASED RECOMMENDATION SYSTEM***" by ***Mugdha Govilkar, Tejas Ingale, Mihir Joshi, Abhishek Kuvar*** is approved for the degree of ***Bachelor of Engineering***.

Programme Outcomes	Grade
PO1,PO2,PO3,PO4,PO5,PO6,PO7, PO8, PO9, PO10, PO11, PO12 PSO1, PSO2	

Date:
Project Guide:

Project Report Approval
For
B. E (Computer Engineering)

This thesis/dissertation/project report entitled "***ASPECT AND REVIEW BASED RECOMMENDATION SYSTEM***" by ***Mugdha Govilkar, Tejas Ingale, Mihir Joshi, Abhishek Kuvar*** is approved for the degree of ***Bachelor of Engineering***.

Internal Examiner

External Examiner

Head of the Department

Principal

Date:
Place:

Declaration

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, we have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature)

(Mugdha Govilkar, Roll no 30)

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(Tejas Ingale, Roll no 32)

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(Mihir Joshi, Roll no 36)

(Signature)

(Abhishek Kuvar, Roll no 42)

Date:

ACKNOWLEDGEMENT

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We are deeply indebted to Head of the Computer Department **Dr.(Mrs.) Nupur Giri** and our Principal **Dr. (Mrs.) J.M. Nair ,** for giving us this valuable opportunity to do this project.

We express our hearty thanks to them for their assistance without which it would have been difficult in finishing this project synopsis and project review successfully.

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We wish to express our profound thanks to all those who helped us in gathering information about the project. Our families too have provided moral support and encouragement at several times.

Computer Engineering Department
COURSE OUTCOMES FOR B.E PROJECT

Learners will be to,

Course Outcome	Description of the Course Outcome
CO 1	Able to apply the relevant engineering concepts, knowledge and skills towards the project.
CO2	Able to identify, formulate and interpret the various relevant research papers and to determine the problem.
CO 3	Able to apply the engineering concepts towards designing solution for the problem.
CO 4	Able to interpret the data and datasets to be utilized.
CO 5	Able to create, select and apply appropriate technologies, techniques, resources and tools for the project.
CO 6	Able to apply ethical, professional policies and principles towards societal, environmental, safety and cultural benefit.
CO 7	Able to function effectively as an individual, and as a member of a team, allocating roles with clear lines of responsibility and accountability.
CO 8	Able to write effective reports, design documents and make effective presentations.
CO 9	Able to apply engineering and management principles to the project as a team member.
CO 10	Able to apply the project domain knowledge to sharpen one's competency.
CO 11	Able to develop professional, presentational, balanced and structured approach towards project development.
CO 12	Able to adopt skills, languages, environment and platforms for creating innovative solutions for the project.

ABSTRACT

The instinctive medium that humans use for communication is of words and not numbers. Ratings and reviews are the most common form of feedback that customers of a product or service can provide on an online platform. While ratings are quantitative, reviews are expressive. Extracting the users' true sentiments from their review with respect to each aspect is highly insightful. Our project leverages the Stanford CoreNLP Parser to apply PoS tagging, Coreference Resolution and Dependency Inferencing for constructing aspect-sentiment pairs. The aspect polarities are calculated using an amalgam of sentiment lexicons like VADER and TextBlob. We have also used some filtering rules with hard limits to ensure that our system only has the most relevant reviews for processing. One filter obstructs spammed reviews and blacklists the reviewers for the same. Another makes sure that the reviews to be processed have been marked helpful by a strong majority of users. Our system provides recommendations to users based on prioritised aspects. We construct user profiles and product profiles to map according to aspect preferences. The Stanford CoreNLP Parser dependencies have been thoroughly exploited to design the rules for aspect-sentiment extraction.

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