

INSIGHT STRATEGIST

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SENTIMENT ANALAYSIS OF CUSTOMER REVIEW IN ZOMATO DATASET



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PRESENTATION HIGHLIGHTS

FOCUS AREAS

- Problem statement and data set used to solve the problem.
- Importance of Problem statement.
- Approach chosen.
- Evaluation of solution/algorithm we implemented.
- Insights and interesting information gained from the project.



PROBLEM STATEMENT

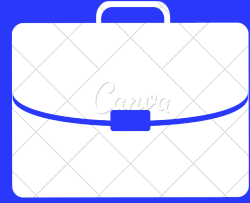
TO EXTRACT WORDS FROM THE REVIEWS AND ANALYZE THEM, SO WE KNOW HOW USERS INTERACT IN THE ZOMATO REVIEW SECTION AS ZOMATO HAS NO SUCH FEATURE.

DATASET USED

ZOMATO DATASET FROM KAGGLE WAS CHOSEN.

IT CONSISTS OF TABULAR FORM CONTAINING SUMMARISED INFORMATION SUCH AS NAME, ADDRESS, PHONE NUMBER, WEBSITE URL, AND CUSTOMER FEEDBACK.

THE DATA IS IN A CSV FORMAT AND IS APPROXIMATELY 547MB IN SIZE. THE DATASET CONTAINS 17 VARIABLES ALL OF WHICH WERE SCRAPED FROM THE ZOMATO WEBSITE. THE DATASET CONTAINS DETAILS OF 51,717 RESTAURANTS IN BENGALURU.(17 COLUMNS AND 51717 ROWS)



Increases efficiency and
saves the cost of manual
analysis



Understanding the
customer's overall
feedback



Aids with making better
business decisions

IMPORTANCE OF THE PROJECT

APPROACH CHOSEN

SENTIMENT ANALYSIS USING LSTM MODEL

SENTIMENT ANALYSIS:

SENTIMENT ANALYSIS IS A PART OF NATURAL LANGUAGE PROCESSING (NLP) WHICH IS A SUBFIELD OF ARTIFICIAL INTELLIGENCE THAT DEALS WITH UNDERSTANDING AND DERIVING INSIGHTS FROM HUMAN LANGUAGES SUCH AS TEXT AND SPEECH. AS THE NAME SUGGESTS, IT MEANS TO IDENTIFY THE VIEW OR EMOTION BEHIND A SITUATION. IT BASICALLY MEANS TO ANALYZE AND FIND THE EMOTION OR INTENT BEHIND A PIECE OF TEXT OR SPEECH OR ANY MODE OF COMMUNICATION.

MODEL CHOSEN

LSTM:

LONG SHORT-TERM MEMORY (LSTM) IS A SPECIAL TYPE OF RECURRENT NEURAL NETWORK (RNN) ARCHITECTURE THAT WAS DESIGNED OVER SIMPLE RNNs FOR MODELING TEMPORAL SEQUENCES AND THEIR LONG-RANGE DEPENDENCIES MORE ACCURATELY.



APPROACH USED

1. PRE-PROCESSING: DATA PRE-PROCESSING, VISUALISATIONS & TEXT PRE-PROCESSING
2. BUILDING A MODEL
3. EVALUATION

IMPLEMENTATION AND EVALUATION

MODEL BUILDING METHODS:

- FIT THE KERAS TOKENIZER
- TOKENIZE AND PAD TRAINING DATA
- KERAS EMBEDDINGS LAYER
- TRAIN THE MODEL

EVALUATION:

TO EVALUATE THE MODEL, WE USED KERAS'S `MODEL.EVALUATE()` METHOD AND PASSED THE TESTING DATASET AS PARAMETERS.



EXPERIMENTAL RESULTS

FOR THIS PROJECT, WE CHOOSE ACCURACY AS OUR MAIN
EVALUATION CRITERIA.

THE MODEL SHOWS OVERALL ACCURACY AS 0.96 AND THE SCORE AS
0.12.



DATASET CHALLENGES

THAT COME WITH LARGE DATASET AND HOW TO
HANDLE THEM

SENTIMENTAL ANALYSIS

HOW TO USE AN LSTM MODEL FOR
SENTIMENTAL ANALYSIS

EFFECTS ON BUSINESSES

HOW BUSINESSES CAN BE PROFITTED USING
SENTIMENT ANALYSIS

**WHAT WE LEARNT
& INTERESTING
INSIGHTS**



INDIVIDUAL CONTRIBUTION

ANWESHA KELKAR

- 1.Literature Review Report(Phase 1):
3 papers
- 2. Data Visualisation
- 3. Building a model
- 4. Final evaluation and conclusion of
project
- 5. Final Report (Phase 2)

MOHNISH SRIKANTH

- 1.Literature Review Report (Phase 1):
3 papers
- 2. Data Visualisation
- 3. Pre-processing Text
- 4. Final evaluation and conclusion of
project
- 5. Final Report (Phase 2)

AARUSHI AGARWAL

- 1.Literature Review Report (Phase
1): 3 papers
- 2. Data Pre-processing
- 3. Pre-processing Text
- 4. Final evaluation and conclusion of
project
- 5. Final Report (Phase 2)

ARJUN HARISH

- 1.Literature Review Report (Phase
1): 3 papers
- 2. Data Pre-processing
- 3. Building a model
- 4. Final evaluation and conclusion
of project
- 5. Final Report (Phase 2)