



MALIGNANT CLASSIFIER

NAME OF THE PROJECT

Submitted by:

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## **ACKNOWLEDGMENT**

This includes mentioning of all the references, research papers, data sources, professionals and other resources that helped you and guided you in completion of the project.

## **INTRODUCTION**

- **Business Problem Framing**

Describe the business problem and how this problem can be related to the real world.

Since it is the data extracted from the different social media apps it is the real world problem.

- **Conceptual Background of the Domain Problem**

Describe the domain related concepts that you think will be useful for better understanding of the project.

No domain required here.

- **Review of Literature**

This is a comprehensive summary of the research done on the topic. The review should enumerate, describe, summarize, evaluate and clarify the research done.

- **Motivation for the Problem Undertaken**

Describe your objective behind to make this project, this domain and what is the motivation behind.

important to know the malignant comments of the social media users.

# Analytical Problem Framing

- **Mathematical/ Analytical Modeling of the Problem**

Describe the mathematical, statistical and analytics modelling done during this project along with the proper justification. Removing the null values, outliers and skewness

- **Data Sources and their formats**

What are the data sources, their origins, their formats and other details that you find necessary? They can be described here.

Provide a proper data description. You can also add a snapshot of the data.

Different social media apps comments.

- **Data Preprocessing Done**

What were the steps followed for the cleaning of the data? What were the assumptions done and what were the next actions steps over that?

Removing the punctuations

Converting into lower case letters

Word\_tokenize

Stemming

Lemmatization

TFIDF

- **Data Inputs- Logic- Output Relationships**

Describe the relationship behind the data input, its format, the logic in between and the output. Describe how the input affects the output.

Non\_Linear relationship between the input and output

- State the set of assumptions (if any) related to the problem under consideration

Here, you can describe any presumptions taken by you.

- Hardware and Software Requirements and Tools Used

Listing down the hardware and software requirements along with the tools, libraries and packages used. Describe all the software tools used along with a detailed description of tasks done with those tools.

Numpy

Seaborn

Matplotlib

Nltk

Wordcloud sklearn

## **Model/s Development and Evaluation**

- Identification of possible problem-solving approaches (methods)

Describe the approaches you followed, both statistical and analytical, for solving of this problem. Applied all the ML models

- Testing of Identified Approaches (Algorithms)

Listing down all the algorithms used for the training and testing.

Random forest classifier

Decision tree classifier

Multinomial NB XGBClassifier

gradientBoostingClassifier

- **Run and Evaluate selected models**

Describe all the algorithms used along with the snapshot of their code and what were the results observed over different evaluation metrics.

- **Key Metrics for success in solving problem under consideration**

What were the key metrics used along with justification for using it?  
You may also include statistical metrics used if any.

Accuracy\_score and classification\_report

- **Visualizations**

Mention all the plots made along with their pictures and what were the inferences and observations obtained from those. Describe them in detail.

If different platforms were used, mention that as well.

Boxplot :checked for all the outliers

Distplot for checking the distribution of the variables

- **Interpretation of the Results**

Give a summary of what results were interpreted from the visualizations, preprocessing and modelling.

# CONCLUSION

- Key Findings and Conclusions of the Study

Describe the key findings, inferences, observations from the whole problem.

We get to know which product got the best ratings and reviews

- Learning Outcomes of the Study in respect of Data Science

List down your learnings obtained about the power of visualization, data cleaning and various algorithms used. You can describe which algorithm works best in which situation and what challenges you faced while working on this project and how did you overcome that.

We get to know which product got the best ratings and reviews

- Limitations of this work and Scope for Future Work

What are the limitations of this solution provided, the future scope?  
What all steps/techniques can be followed to further extend this study and improve the results.

Not much