INNOMATICS® RESEARCH LABS

INNOVATION. AUTOMATION. ANALYTICS

PROJECT ON

Sentiment Analysis of Real-time Flipkart Product Reviews

Prepared By
Lingerkar Rithikha

About me

Currently pursuing a Master of Science in Data Science, my educational background is rooted in a strong foundation of analytical skills. My passion lies in unraveling the hidden patterns within datasets and extracting valuable insights. Through a previous internship in the insurance sector, I gained practical experience in data analysis, honing my ability to derive meaningful conclusions from complex datasets. My motivation to learn data science stems from a deep-seated curiosity and a desire to contribute to the field by leveraging data-driven approaches to solve real-world problems.

www.linkedin.com/in/rithikha-lingerkar-82b18128a

https://github.com/LingerkarRithikha/Regex-Matcher-App

INNOMATICS
RESEARCH LABS

Objective:

The objective of this project is to classify customer reviews as positive or negative and understand the pain points of customers who write negative reviews. By analyzing the sentiment of reviews, we aim to gain insights into product features that contribute to customer satisfaction or dissatisfaction.

Dataset:

A team of Data Engineers have already scraped real-time data from Flipkart website. They followed the instructions **given in this documentation** for extracting user reviews. **Don't scrape your own data**. Use the dataset given below to solve the problem statement.
Click Here to download the data.

The dataset consists of 8,518 reviews for the "YONEX MAVIS 350 Nylon Shuttle" product from Flipkart. Each review includes features such as Reviewer Name, Rating, Review Title, Review Text, Place of Review, Date of Review, Up Votes, and Down Votes.
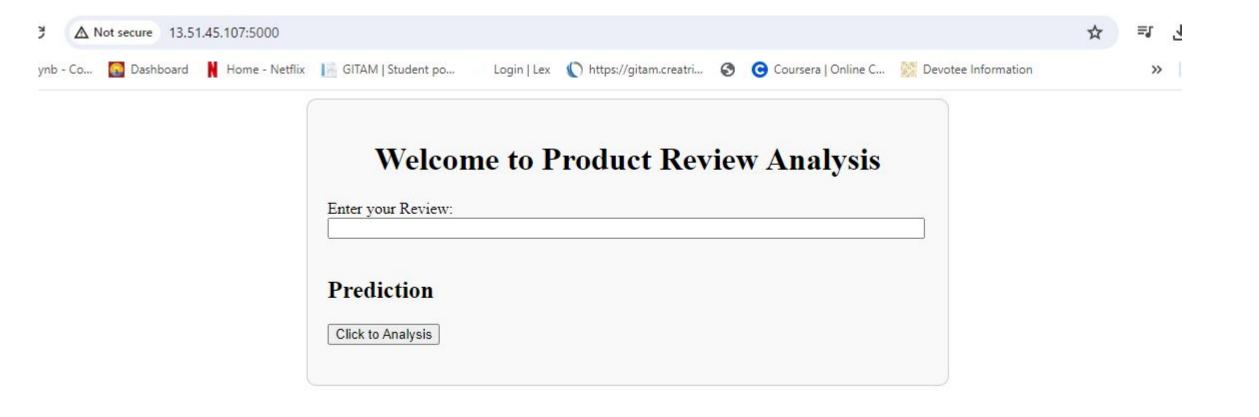
Steps:

1. **Data Preprocessing**

2. **Modeling Approach**

3. **Model Deployment**

Workflow

1. Data Loading and Analysis: Gain insights into product features that contribute to customer satisfaction or dissatisfaction.

2. Data Cleaning: Preprocess the review text by removing noise and normalizing the text.

3. Text Embedding: Experiment with different text embedding techniques to represent the review text as numerical vectors.

4. Model Training: Train machine learning and deep learning models on the embedded text data to classify sentiment.

5. Model Evaluation: Evaluate the performance of the trained models using the F1-Score metric.

6. Flask or Streamlit App Development: Develop a Flask or Streamlit web application for sentiment analysis of user-provided reviews.

7. Model Deployment: Deploy the trained sentiment classification model along with the Flask or Streamlit app on an AWS EC2 instance.

8. Testing and Monitoring: Test the deployed application and monitor its performance for any issues or errors.

Welcome to Product Review Analysis

Enter your Review:

[   ]

Prediction

[Click to Analysis]

Deploy the application on AWS Cloud.

URL : http://13.51.45.107:5000/