Goomba Sentiment Analysis Project

Documentation

1. Introduction

1.1 Purpose

The purpose of this document is to provide an overview of the Goomba Sentiment Analysis project. It outlines the functionalities, properties, and components of the project, along with the technologies used.

1.2 Scope

The Goomba Sentiment Analysis project aims to analyze the sentiment of text input and determine whether it is positive or negative. It utilizes a Long Short-Term Memory (LSTM) model trained on the IMDB dataset for sentiment analysis.

2. Overview

2.1 Functionalities

Input text for sentiment analysis

Choose between LSTM model for analysis

View prediction results along with sentiment and confidence level

Evaluate model performance with accuracy, precision, recall, and F1-score metrics

2.2 Technologies Used

Python

Flask

TensorFlow

Keras

HTML/CSS

JavaScript (optional for additional frontend functionality)

3. Components

3.1 LSTM Model

Utilizes a Long Short-Term Memory (LSTM) neural network architecture

Trained on the IMDB dataset for sentiment analysis

3.2 Flask Application

Provides the backend functionality for the project

Handles user input, model predictions, and evaluation requests

3.3 Frontend Interface

HTML/CSS templates for user interaction

Allows users to input text, select models, and view prediction results

Displays evaluation metrics and confusion matrices

4. Functionality Details

4.1 Text Input

Users can enter text in the provided input field.

4.2 Model Selection

Users can choose the LSTM model for sentiment analysis.

4.3 Prediction Results

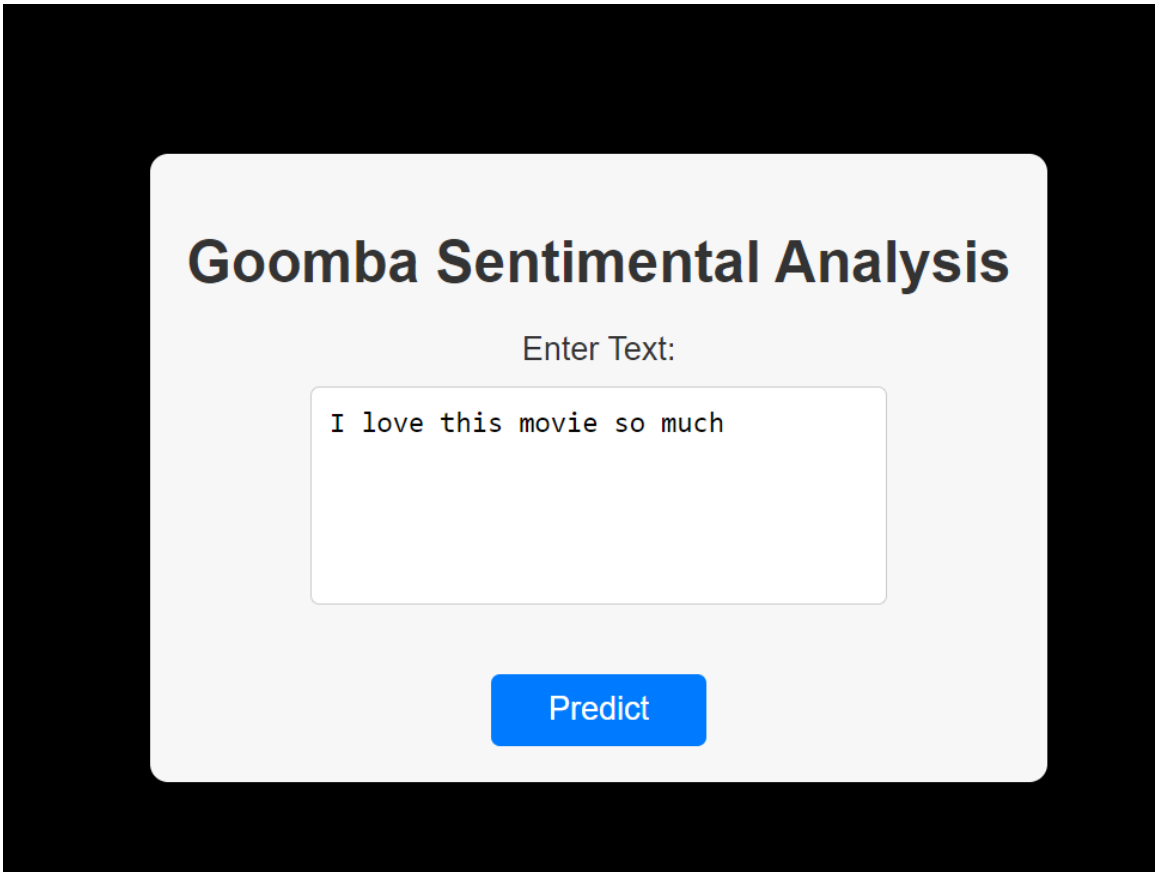
Upon submission, the LSTM model predicts the sentiment of the input text and displays the result along with the confidence level.

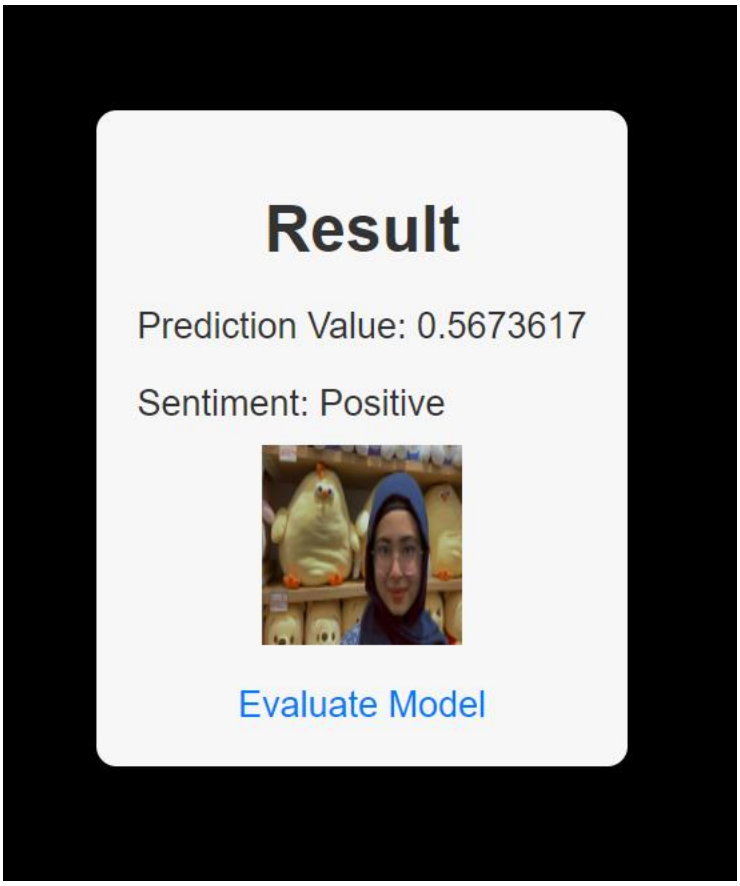
4.4 Model Evaluation

Users can evaluate the performance of the LSTM model by calculating accuracy, precision, recall, and F1-score.

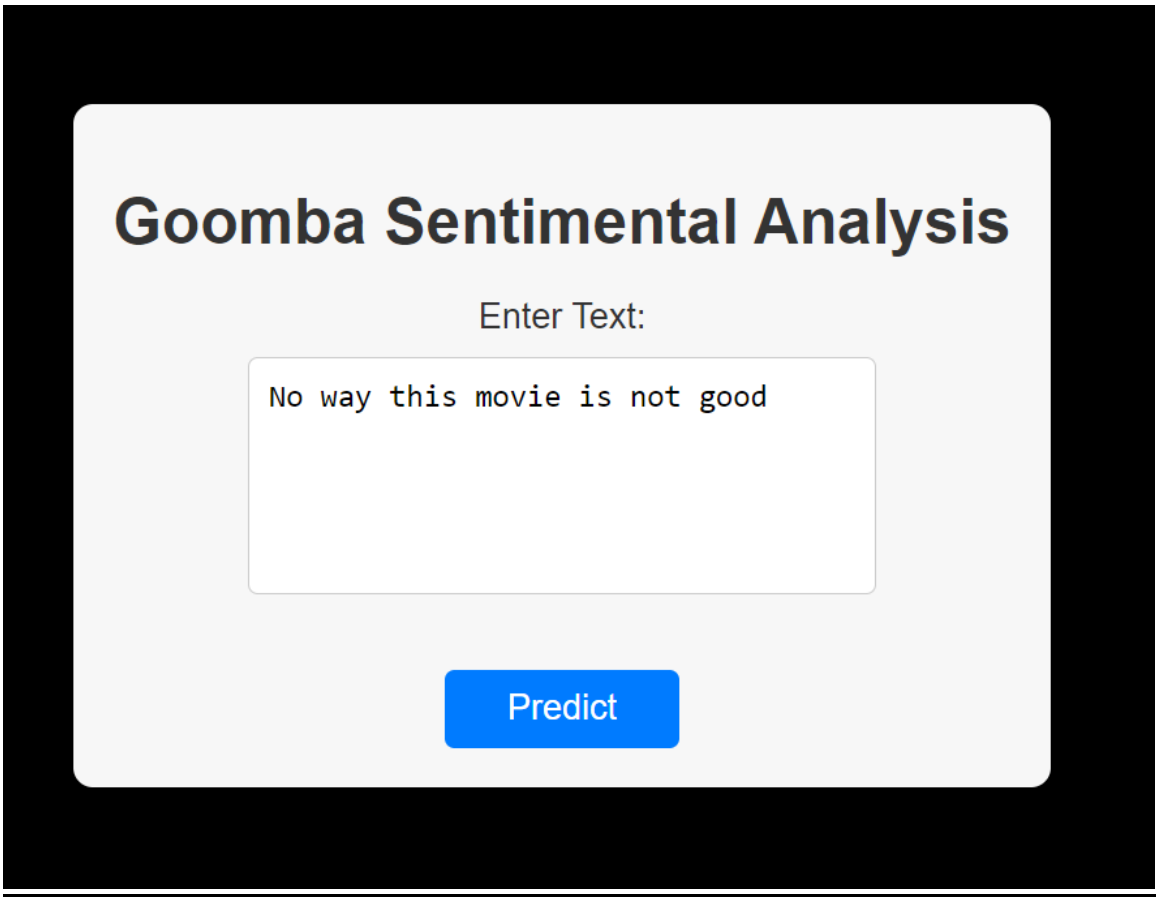
5. Screenshots

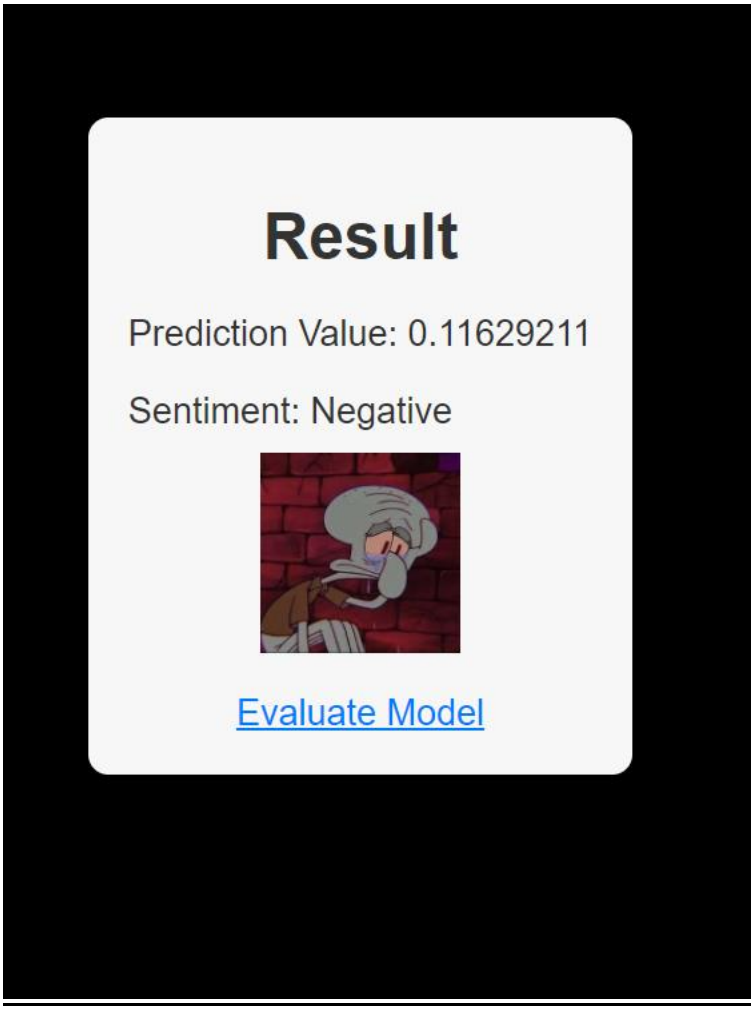
for positive sentiment:


Goomba Sentimental Analysis
Enter Text:
I love this movie so much
Predict



for negative sentiment:


Goomba Sentimental Analysis
Enter Text:
No way this movie is not good
Predict



6. Conclusion

The Goomba Sentiment Analysis project provides a user-friendly interface for analyzing text sentiment using an LSTM model. With its intuitive design and robust functionality, it serves as a valuable tool for sentiment analysis tasks.

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