ReadME file

 # Classification

1. **Roberta.ipynb** - This notebook showcases the use of the RoBERTa model for a text classification task. It includes steps for preprocessing text data, model training, evaluation, and error analysis.
2. **Random_Forest.ipynb** - This notebook demonstrates the application of the Random Forest algorithm. It focuses on feature extraction, model tuning, and performance metrics.
3. **LSTM.ipynb** - This notebook presents the implementation of an LSTM network for sequence data processing. It covers data preparation, model architecture, training, and validation.

 # Clustering

Overview

This repository contains code for performing topic modeling and clustering on a text dataset using various techniques such as Latent Dirichlet Allocation (LDA) with KMeans, Hierarchical and expectation Maximization Clustering. It demonstrates how to preprocess text data, tokenize it, create document-term matrices, and evaluate the coherence of different topic models.

Dependencies

- Python 3.x

- Gensim

- Scikit-learn

- NLTK

File -

ChampionModel_LDAKMeansClusteringFinalProject.ipynb

 # Flask Chatbot API README

Overview

This Flask application serves as a backend for a chatbot API. It receives webhook requests from a chatbot platform, processes the requests, and returns appropriate responses based on the defined logic.

Dependencies

- Python 3.x

- Flask

- Pandas

- NumPy

This will start the Flask app and make it accessible at http://localhost:8080 by default.

Endpoints

- /webhook:

  - Method: POST

  - This endpoint is used to receive webhook requests from the chatbot platform.

  - It processes the incoming requests, performs actions based on the intent recognized from the request, and returns appropriate responses.

Dataset

The dataset used in this example is expected to be provided as a CSV file named Dataset_with_LDA_embeddings_all_3_models.csv. This CSV file should contain necessary data for processing the webhook requests.

#Chatbot link

https://bot.dialogflow.com/5387e166-d33a-408c-97db-dd9a0d02bbfd