Title: Text Sentiment Analysis for Customer Reviews

Description:

The goal of my project is to build a sentiment analysis model that can classify customer reviews into positive, negative, or neutral sentiments.
This model can be applied to various industries like e-commerce, hospitality, or product reviews.

Steps:
 Data Collection:
- Gather a dataset of customer reviews from a specific domain (e.g., Product reviews from an e-commerce platform like Amazon, Walmart, Costco or Instacart).
- Dataset: [Amazon Commerce reviews set - UCI Machine Learning Repository](#)

 Data Preprocessing:
- Clean and preprocess the text data by removing special characters, stopwords, and performing stemming or lemmatization.

 Labeling:
- Manually label the reviews as positive, negative, or neutral to create a labeled training dataset.

 Feature Extraction:
- Convert the preprocessed text data into numerical features using techniques like TF-IDF ([Term Frequency-Inverse Document Frequency](#)) or word embeddings.

 Model Selection:
- Choose a classification algorithm (e.g., Logistic Regression, Support Vector Machines, or a simple neural network) for sentiment analysis.

 Model Training:
- Train the selected model on the labeled training dataset.

 Model Evaluation:
- Evaluate the model's performance using metrics like accuracy, precision, recall, and F1-score on a separate validation dataset.

Resources Needed:
- Dataset of customer reviews from the chosen domain.
- Python and necessary libraries for data preprocessing, feature extraction, and model training (e.g., NLTK, scikit-learn).
- Development environment (Jupyter Notebook or any Python IDE of your choice).

Expected Deliverables:
- Trained sentiment analysis model
- Model evaluation report with performance metrics