**FLIPKART REVIEWS FOR SENTIMENTAL ANALYSIS USING ML**

**1. Importing Libraries and Data:**

You import several libraries like Pandas, Scikit-learn, and NLTK, which are essential for data manipulation, machine learning models, and text processing.

**2. Loading Data:**

You load the Flipkart reviews dataset (flipkart\_data.csv) and check the first few rows of the data.

**3. Preprocessing Reviews:**

You clean the reviews by removing punctuation, converting text to lowercase, and removing stopwords (common words like "and", "the", etc.). This is done in the preprocess\_text function.

**4. Labeling Data:**

You convert the rating column into a binary label:

* **1** (positive) for ratings 5 and above
* **0** (negative) for ratings below 5

**5. Visualizing Data:**

You visualize the frequency of positive and negative reviews using seaborn.countplot and create a Word Cloud for positive reviews.

**6. Vectorizing Text Data:**

You convert the text data into numerical vectors using TfidfVectorizer. This helps represent the frequency of words in the reviews in a way that machine learning models can understand.

**7. Model Training:**

You perform a train-test split and use a DecisionTreeClassifier for the sentiment classification task.

**8. Evaluating the Model:**

You evaluate the model's performance using the accuracy score and confusion matrix.

**Conclusion:**

By following these steps, you preprocessed the review data, converted it into a form suitable for machine learning models, and trained a model to classify reviews as positive or negative. You also visualized important features like the distribution of ratings and key words in positive reviews.