■ Language Detection Model

Project Overview

The Language Detection Model is a Natural Language Processing (NLP) project that predicts the language of a given text using Machine Learning and text classification techniques.

How the Model Works

1. Import Libraries: NumPy and Pandas are used for data handling.
2. Load Dataset: language.csv contains text samples and their languages.
3. Text Vectorization: CountVectorizer converts text into numerical features.
4. Train-Test Split: Dataset divided into training and testing sets.
5. Model Training: Multinomial Naive Bayes algorithm is trained.
6. Evaluation: Accuracy score evaluates model performance.
7. Prediction: User input text is transformed and language predicted.

Example Code

```
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.naive_bayes import MultinomialNB

cv = CountVectorizer()
x = cv.fit_transform(text_data)

model = MultinomialNB()
model.fit(X_train, y_train)
```

Model Accuracy

The trained model achieved approximately 95% accuracy on the test dataset.

Author

Mohd Aas Khan Machine Learning & NLP Enthusiast