Textblob

Agenda

- NLP Recap
- Introduction to Textblob
- Functionalities of Textblob
- Textblob Sentiment Analysis

NLP Recap

NLP Recap

What is NLP?

- NLP is a process of manipulation of natural language for example English, Hindi, French in form of audio or text, using some software.
- It is an automated process to extract required information from data by applying machine learning algorithms.
- Examples of NLP: POS Tagging, NER, Speech Recognition, Sentiment Analysis, Language Translation.

NLP Recap

Data Preprocessing in NLP

- Unstructured data makes NLP as a difficult task.

- Basic Data Preprocessing steps in NLP are:
  - Text Normalization
  - Stopword removal
  - Punctuation Removal
  - URL/Email id Removal
  - Number Removal
  - Whitespace Removal
  - Normalizing text to ASCII
  - Stemming
  - Lemmatization
  - Text Vectorization

NLP Recap

Stemming

- Stemming is a process of removing suffix from a word in order to convert it to its root form.
- For Example: The word “Runs” has a suffix “s”. On applying Stemming to “Runs”, we get run.
- Sometimes it fails as well. For example: On applying Stemming to “Running”, we get “Runn”, however the correct root of “Running” is “Run”.

NLP Recap

Lemmatization

- Like Stemming, Lemmatization is a process of converting a word it to its root form.
- For Example: On applying Lemmatization to “eaten”, we get “eat”.
- As opposite of Stemming, lemmatization uses the lexical rules to transform a word to its normal form which makes it complex.

NLP Recap

Text Vectorization

- In order to apply machine learning / deep learning on Text data, we need to convert them to its vector form.

- Types of Text Vectorization:
  - Bag of Words
  - TF-IDF
  - Word Embeddings

Introduction to Textblob

Introduction to Textblob

What is Textblob?

- Textblob is an open-source python library used to perform NLP activities like Lemmatization, Stemming, Tokenization, Noun Phrase Extraction, POS Tagging, N-Grams, Sentiment Analysis.
- It is faster than NLTK, however it does not provide the functionalities like vectorization, dependency parsing.
- Text Classification, Sentiment Analysis can be performed using Textblob.

Introduction to Textblob

How to Install Textblob?

- pip install textblob

Functionalities of Textblob

Textblob Sentiment Analysis

Summary

Summary

Thank You