NLP

NLP stands for Natural Language Processing, which is a part of Computer Science, Human language, and Artificial Intelligence. It is the technology that is used by machines to understand, analyse, manipulate, and interpret human's languages. It helps developers to organize knowledge for performing tasks such as translation, automatic summarization, Named Entity Recognition (NER), speech recognition, relationship extraction, and topic segmentation.

Components of NLP

There are the following two components of NLP -

1. Natural Language Understanding (NLU)

NLU enables machines to understand and interpret human language by extracting metadata from content. It performs the following tasks:

- Helps analyze different aspects of language.
- Helps map the input in natural language into valid representations.

Natural Language Understanding (NLU) helps the machine to understand and analyse human language by extracting the metadata from content such as concepts, entities, keywords, emotion, relations, and semantic roles. NLU mainly used in Business applications to understand the customer's problem in both spoken and written language.

2. Natural Language Generation (NLG)

Natural Language Generation (NLG) acts as a translator that converts the computerized data into natural language representation. It mainly involves Text planning, Sentence planning, and Text Realization. NLG is a method of creating meaningful phrases and sentences (natural language) from data. It comprises three stages: text planning, sentence planning, and text realization.

- Text planning: Retrieving applicable content.
- Sentence planning: Forming meaningful phrases and setting the sentence tone.
- Text realization: Mapping sentence plans to sentence structures.