Interview Questions

- What is syntactic processing?
  - It is a technique of analysing sentences to determine the grammatical structure of a sentence. By conducting syntactic analysis, a machine can analyse and understand the function of words arranged in a sentence. It employs grammar rules to find the structure of sentences.

- What is PoS Tagging?
  - Parts-of-speech (POS) tagging is used to assign tags to words such as nouns, adjectives and verbs. The software uses POS tagging to first read the text and then differentiate the words by tagging. The software uses algorithms such as rule-based tagging, sequential probability techniques such as the Hidden Markov Model (HMM) and deep learning methods for parts-of-speech tagging.

- Explain Dependency Parsing in NLP.
  - Dependency parsing is a process of assigning a syntactic structure to a sentence and identifying its dependency parse tags. This process is crucial to understand the relations among words in a sentence.
- What is NER?
  - Named entity recognition (NER) is also referred to as entity chunking or entity identification. It is the task of identifying and categorising the key information that includes entities such as a person, a location, a date or an event in the text. An entity can be any word or a series of words that consistently refers to the same thing.

- Where can NER be used?
  - Classifying content for news providers
  - Automatically summarising resumes using keywords
  - Search engine algorithms such as Google Search
  - Empowering recommendation systems
  - Classifying treatment and diseases in biomedical data sets

- What are some popular Python libraries that are used for NLP?
  - Spacy
  - NLTK

- What are the real-life examples of syntactic processing?
  - Product features categorisation using customer reviews
  - Name Entity Recognition (NER) in question answering systems
  - NER identification of diseases and treatment in healthcare
  - Grammar check of the document
  - Heteronym detection

- What are the applications of dependency parsing?
  - Grammar checking
  - Active and passive voice identification and document quality check

- What is parsing?
  - Syntactic analysis or parsing may be defined as the process of analysing the strings of symbols in natural language conforming to the rules of formal grammar.
  - The origin of the word *'parsing'* is from the Latin word *'pars'*, which means 'part'.