UNIT -1 : model Questions

Define Natural Language Processing (NLP) and explain its significance, ambiguity and uncertainty in language and its impact on Natural Language Processing. How do NLP systems handle linguistic ambiguity?

Provide insights into the various applications of NLP that address the challenges posed by linguistic ambiguity. Give specific examples to illustrate the application of NLP in real-world scenarios

Enumerate and elaborate on various applications of Natural Language Processing

Discuss the role of NLP representations in syntax, semantics, and pragmatics. How do these representations contribute to the understanding and generation of natural language?

Provide a comprehensive overview of Natural Language Processing (NLP), covering its definition, objectives, and the challenges it addresses. (2 marks) Explain the significance of NLP representations in syntax, semantics, and pragmatics

Discuss the applications of NLP in real-world scenarios. Highlight the role of NLP in addressing specific challenges in natural language understanding and generation.

UNIT -2 model questions

Define syntactic parsing and explain the importance of grammar formalisms in this context. Discuss the role of tree banks in syntactic parsing?

Explore the role of computational semantics in NLP. How does semantic analysis contribute to tasks such as semantic role labelling and semantic parsing?

Define semantic analysis and discuss the importance of lexical semantics in this context. Explainthe challenges associated with word-sense disambiguation

Explore the efficiency considerations in parsing for Context-Free Grammars (CFG). How do different parsing techniques contribute to efficient syntactic analysis?

Define Statistical Context-Free Grammars (SCFG) and Probabilistic Context-Free Grammars (PCFG). Discuss the significance of probability in syntactic parsing

Discuss about CFG and PCFG with Examples?

UNIT-3

What is POS Tagging and how its importance in NLP?

Brief the POS Properties of POS Tagging with Example?

Discuss the limitations and challenges associated with simple N-gram models in capturing complex language patterns and dependencies.

Explain the concept of simple N-gram models. How do these models represent the probability distribution of sequences of words in a given language?

Sample Questions of Openbook

Explain with specific domain applications of Natural Language Processing (NLP) and tools in current times and potential future developments?

Explain How the Lexical analysis for the given sentence "The quick brown fox jumps over the lazy dog."?

Explain by consider the sentence "The cat chased the mouse" as a single use case and walk through the different phases of syntactic analysis in NLP?

Explain by considering the sentence "The cat chased the mouse" and walk through the Context-Free Grammar (CFG) and Probabilistic Context-Free Grammar (PCFG) methods in syntactic parsing in NLP.

Explain by consider the sentence "Students study hard for their exams" and apply Context-Free Grammar (CFG) and Probabilistic Context-Free Grammar (PCFG) methods in syntactic parsing in NLP.

Example:

User starts typing: "I am going to the"

N-gram model predicts possible next words based on trigrams: ("I am going to the"):

"store" (high probability)

"beach" (moderate probability)

"moon" (lower probability)

The system suggests "store" as the next word based on the highest probability.

Explain how the Suggestion System working methods?