
UNIT I – INTRODUCTION TO NLP

1. Explain the origins and challenges of Natural Language Processing (NLP).
 2. Describe Language Modeling and differentiate between Grammar-based LM and Statistical LM.
 3. Explain Regular Expressions and Finite-State Automata in NLP applications
 4. Explain English Morphology and the role of transducers for lexicon and rules.
 5. What is tokenization? Give an example.
 6. Explain methods for detecting and correcting spelling errors.
 7. Define Minimum Edit Distance and explain its use in NLP.
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UNIT II – WORD LEVEL ANALYSIS

1. Explain unsmoothed N-grams and their evaluation.
 2. What is smoothing in N-grams? Discuss interpolation and backoff techniques.
 3. Describe different word classes and their significance in NLP.
 4. Explain Part-of-Speech (PoS) tagging and its importance.
 5. Compare Rule-based, Stochastic, and Transformation-based PoS tagging approaches.
 6. Discuss the issues in PoS tagging.
 7. Explain Hidden Markov Models and Maximum Entropy Models for PoS tagging.
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UNIT III – SYNTACTIC ANALYSIS

1. Explain Context-Free Grammars and their application in NLP.
 2. Discuss grammar rules for English and the concept of Treebanks.
 3. Discuss Treebanks, Normal Forms for grammar, and their application in syntactic analysis.
 4. Explain Dependency Grammar with suitable examples.
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