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K. S. GROUP OF INSTITUTIONS
K. S. SCHOOL OF ENGINEERING AND MANAGEMENT
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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Date: 22/07/24

CIRCULAR

We would like to inform all 7th semester students that Natural Language Processing (NLP) Activity i.e. quiz will be held on July 26, 2024 at 8.40AM . All students must attend the quiz without fail.

Course Incharge

HOD

K.S. SCHOOL OF ENGINEERING AND MANAGEMENT, BANGALORE - 560109
DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE
SESSION: 2023-2024 (EVEN SEMESTER)
Activity: Quiz(Set B)

USN										

Degree	**: B.E**	**Semester**	**: VI**
Branch	**: AI&DS**	**Date**	**: 26/07/2024**
Course Title	**: Natural Language Processing**	**Course Code**	**: 21AI643**
Duration	**: 30 Minutes**	**Max Marks**	**: 20**

Note: Answer all questions each questions carries 1 mark (Tick the correct answer)

1. Which of the following are potential use cases of NLP?
   a) A self driving car drawing your attention to an advertisement billboard
   b) Given the audio of a song, and its lyrics generate a translated song audio
   c) Understanding a cryptic language
   d) Determining what are the chances that you will win a law suit based on outcomes of previous similar law suits
2. What is stemming in NLP?
   a) Reducing words to their base or root form
   b) Assigning sentiment scores to words
   c) Analyzing grammatical structure
   d) Identifying named entities
3. Which of the below tasks can be performed effectively even without using sophisticated NLP techniques
   a) Identifying the main topic of a document assuming that its title is not provided
   b) Detecting the language in a document
   c) Extracting the phone number, email address and year of graduation from a resume
   d) Substituting words like doesn't, can't, etc with does not, can not, etc
4. What is TF-IDF in the context of NLP?
   a) A deep learning model
   b) A sentiment analysis algorithm
   c) A feature extraction technique
   d) A speech recognition method
5. Which component of WordNet helps in understanding the hierarchical structure of concepts?
   a) Synsets
   b) Hypernyms
   c) Lemmas
   d) Frames
6. What is the purpose of tokenization in NLP?
   a) Identifying parts of speech
   b) Removing stop words
   c) Breaking text into words or phrases
   d) Analyzing sentiment
7. Which of the following is not a common challenge in NLP?
   a) Ambiguity
   b) Parsing
   c) Exact matching
   d) Named entity recognition
8. Consider this below review for co-sleeper sheets for a baby. What is the sentiment in the review? "the shipping was quick. the colors are pretty but the sheets themselves are not soft"
   a. Positive
   b. Negative
   c. Neutral
9. Which one of the following is not a pre-processing technique in NLP ?
   a) Stemming and Lemmatization
   b) converting text to lowercase
   c) Removing punctuations and stop words

d) Sentiment analysis

10. Which of these is an example of a practical NLP application?
    a) Image recognition
    b) Speech synthesis
    c) Weather prediction
    d) Sentiment analysis
11. Which of the following best describes the purpose of regular expressions in NLP?
    a) To represent syntactic structures
    b) To define patterns for string matching and extraction
    c) To perform machine learning tasks
    d) To generate text from a corpus
12. What is the main goal of morphological parsing in NLP?
    a) Identifying sentence boundaries
    b) Analyzing the internal structure of words
    c) Classifying syntactic categories
    d) Predicting semantic meanings
13. Which approach is commonly used to detect spelling errors in text?
    a) Part-of-speech tagging
    b) Named entity recognition
    c) Edit distance calculation
    d) Sentiment analysis
14. Which principle is central to probabilistic parsing techniques?
    a) Maximizing precision in syntactic analysis
    b) Assigning probabilities to different syntactic structures
    c) Parsing sentences without using probabilities
    d) Eliminating ambiguity in parsing results
15. In classical information retrieval systems, what is typically used to match query terms with document contents?
    a) Semantic embeddings
    b) Boolean operators
    c) Reinforcement learning
    d) Neural network architectures
16. What is the primary use of research corpora in computational linguistics?
    a) To store large volumes of unstructured text data
    b) To annotate texts with part-of-speech tags
    c) To provide a standardized benchmark for evaluating NLP systems
    d) To generate synthetic text for machine learning models
17. What is a characteristic feature of alternative models of Information Retrieval Systems?
    a) Emphasis on Boolean operators
    b) Focus on probabilistic relevance ranking
    c) Reliance on exact matching
    d) Use of semantic networks
18. Which model represents documents and queries as vectors in a high-dimensional space?
    a) Boolean retrieval model
    b) Vector space model
    c) Probabilistic model
    d) Latent Dirichlet Allocation (LDA)

19. Which of the following relationships is NOT explicitly represented in WordNet?
    a) Synonymy
    b) Antonymy
    c) Hypernymy
    d) Morphological derivation
20. What type of resource is FrameNet?
    a) A lexicon that organizes words into synsets
    b) A database that documents the range of semantic and syntactic combinatory possibilities of words
    c) A tool for part-of-speech tagging
    d) A corpus of annotated text data

Course In-charge

HOD