1-**ANN** Consists of artificial neuron cells simulating the human brain

2-ANN Contains **one input layer ,N hidden layers ,one output layer**

3-**Activation function** is output of the cell

4-The primary role of the Activation Function is to transform the summed weighted input from the node into an output value to be fed to the next hidden layer or as output **(True)**

5-**Softmax function** is An activation function for multi classification outputs of NN

6-**BOW:** calculate a matrix with its values represent the frequency of the word occurrences in the document

7-**N Gram:** based on using one or more of the existing words to predict the missing word

8-No standard implementation for CBOW in Spacy & NLTK **(True)**

9- **Article spinning** is a CBOW Applications

10- **Article spinning** used to describe the rewriting of articles with keeping the original meaning .

11- **SG** Predict a word given its context .

12- **Skip gram** based on N gram technique.

13- Skip-Gram learning model input is a **one-hot encoded word** and the output is the **word's context.**

14- Selecting the next word in skip gram is based on **Softmax GF**

15- When processing large numbers of words, **the probabilities of Softmax become tiny and close.**

16- Two common techniques for the next word selection in SG are **Hierarchical softmax ,Negative sample selection**

17- **Hierarchical softmax** utilizes a multi-layer binary tree

18- **Negative sample selection** Train the model with positive samples and a limited number of negative samples **(True)**

19- BOW is Not considering word meanings **(True)**

20- VS allows NLP models to understand the words meanings **(True)**

21- Word by doc Can be used in text Clustering **(True)**

22-**IF-TDF** is a statistical measure/weight that evaluates how relevant a word is to a document in a collection of documents.

23- **TDF** Refers to how common or rare a word is in the entire document set

24- **Text similarity** Concerned with the similarity between words in typing or meaning

25- **Confusion matrix** A matrix that assigns the relationships among the letters with each other in terms of replacement.

26- *Distributional similarity* **is Understanding the meaning of an anonymous word regarding the surrounding context words.**

27- *Crashed blossoms problem* **: miss-understood texts.**

28- Use *RE* **library for searching text patterns in text context**

29- *POS Tagging* **Determine lexical category of the word based on its meaning in the context**

30- *Lemmatization* **additionally reduces the word to its** *root*

31- Spacy doesn't support stemming, instead supports Lemmatization

31- Lemmatization of Spacy more better than steaming

32- *Zeugma Test* **Can be defined as Using a word to govern two or more words though appropriate to only one**

33- *NER* **Find and classify important names in text such as person names, organizations names.**

34- You can edit Stopwords list by removing or appending to the open source libraries such as Spacy. *(True)*

35- NLTK supports Stopwords list for Arabic language *(True)*

36- *Matcher* **is a tool that admits the connection between different words for referring to the same meaning.**

37- There are 2 style of visualization : *Dependencies , Entities*

38- *Lexicons* **is a component of NLP system that contains information about individual words or tokens**

39- *Classifier Lexicons:* **contains positive labeled words in a file and negative labeled words in another separate file**

40- *Explanatory Lexicons:* **like a dictionary which introduces the full meanings of the words as well as the relations with other words**

41- different lexicons are not identical *(True)*

42- *WordNet* **is a large lexical database of English. Nouns, verbs, adjectives and adverbs specifically designed for NLP Apps**

43- *Synset (synonym set)* **is a special kind of simple interface provide a set of the nearest synonyms that instantiates a concept or sense**

44- Synsets are interlinked by means of conceptual-semantic and lexical relations *(True).*

45- *LM* **Use of various statistical and probabilistic techniques to determine the probability of a given sequence of words occurring in a sentence to be semantically and grammatically correct**

1. Determing the relations according to the words meaning are used in Lexicons building, sentimental Analysis, chatbot APPs.

2. •

3. • Zeugma Test used in homographs.

   Word Embedding / word vector is a numeric vector input that represent a word in Lower dimensional

4. • Feature: Anything that relate words to one another.

5. • Text Vector is a mathematical operations applied based on the word embedding.

6. • Word analagy is how words are close or distant from each other.

7. Word Embedding is used to get the similarity between 2 words   (True)

8. in vector we use SCIPY lib & SPatial functions

9. SCIPY lib is used to Perform math operations on vectors   (True)

10. Word 2 Vec Extend / Employs the Word Embedding concept.

11. Word2Vec Derive similarities between words to allow prediction the missing words

12. CBoW: employs a group of words to get missing word.

13. SG: employs a word to get a group of words

14. CBaW based on BoW & NGRAM.