SNS COLLEGE OF ENGINEERING

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Department of Artificial Intelligence and Data Science

Course Name – 19AD601 – Natural Language Processing

III Year / VI Semester

Unit 4 – SEMANTICS

Topic 1- Introduction to lexical semantics

Introduction to lexical semantics

- Lexical semantics is the branch of linguistics which is concerned with the systematic study of word meanings. Probably the two most fundamental questions addressed by lexical semanticists are:

- (a) how to describe the meanings of words, and

- (b) how to account for the variability of meaning from context to context.

- These two are necessarily connected, since an adequate description of meaning must be able to support our account of variation and our ability to interpret it.

- The linguistic study of systematic meaning related structure of lexemes is called Lexical Semantics. A lexeme is an individual entry in the lexicon.

Introduction to lexical semantics

- A lexicon is meaning structure holding meaning relations of lexemes.

- A lexeme may have different meanings. A lexeme's meaning component is known as one of its senses.

- A lemma or citation form is the grammatical form that is used to represent a lexeme.

- This is often the base form; thus carpet is the lemma for carpets.

- The lemma or citation form for sing, sang, sung is sing.

Introduction to lexical semantics

- Lexical items participate in regular patterns of association with each other.

Some relations between lexical items include
- hyponymy,
- hypernymy,
- synonymy, and
- antonymy, as well as
- homonymy.

Hyponymy
- It may be defined as the relationship between a generic term and instances of that generic term.

- Here the generic term is called hypernym and its instances are called hyponyms.

- For example, the word color is hypernym and the color blue, yellow etc. are hyponyms.

Introduction to lexical semantics

Polysemy

- Polysemy is the phenomenon of multiple related meanings in a same lexeme.

- It is a word or phrase with different but related sense.

- In other words, we can say that polysemy has the same spelling but different and related meaning.

- For example, the word "bank" is a polysemy word having the following meanings –
-     A financial institution.
-     The building in which such an institution is located.
-     A synonym for "to rely on".

Introduction to lexical semantics

Synonymy

- Synonymy is the phenomenon of two different lexemes having the same meaning.

- It is the relation between two lexical items having different forms but expressing the same or a close meaning.

- Examples are 'author/writer', 'fate/destiny'.
- Big and large
- In fact, one of the senses of two lexemes are same.

Introduction to lexical semantics

Semantic analysis

Semantic analysis is the process of relating syntactic structures (phrases, clauses, sentences, text) to their language-independent meanings.

Idioms, being cultural elements, also have to be converted into relatively invariant meanings.

They are special in that they consist of groups of words in a fixed order that have a particular meaning different from the meanings of each word understood on its own.

THANK YOU