

is achieved by recognizing the entity referenced by an anaphor to resolve the references used within the text with the same sense. For example, (i) Ram topped in the class. (ii) He was intelligent. Here i) and ii) together form a discourse. Human beings can quickly understand that the pronoun “he” in (ii) refers to “Ram” in (i). The interpretation of “He” depends on another word “Ram” presented earlier in the text. Without determining the relationship between these two structures, it would not be possible to decide why Ram topped the class and who was intelligent. Coreference resolution is achieved by finding all expressions that refer to the same entity in a text. It is an important step in various NLP applications that involve high-level NLP tasks such as document summarization, information extraction etc. In fact, anaphora is encoded through one of the processes called co-reference.

g) Pragmatic

Pragmatic level focuses on the knowledge or content that comes from the outside the content of the document. It deals with what speaker implies and what listener infers. In fact, it analyzes the sentences that are not directly spoken. Real-world knowledge is used to understand what is being talked about in the text. By analyzing the context, meaningful representation of the text is derived. When a sentence is not specific and the context does not provide any specific information about that sentence, Pragmatic ambiguity arises (Walton, 1996) [143]. Pragmatic ambiguity occurs when different persons derive different interpretations of the text, depending on the context of the text. The context of a text may include the references of other sentences of the same document, which influence the understanding of the text and the background knowledge of the reader or speaker, which gives a meaning to the concepts expressed in that text. Semantic analysis focuses on *literal meaning* of the words, but pragmatic analysis focuses on the *inferred meaning* that the readers perceive based on their background knowledge. For example, the sentence “Do you know what time is it?” is interpreted to “Asking for the current time” in semantic analysis whereas in pragmatic analysis, the same sentence may refer to “expressing resentment to someone who missed the due time” in pragmatic analysis. Thus, semantic analysis is the study of the relationship between various linguistic utterances and their meanings, but pragmatic analysis is the study of context which influences our understanding of linguistic expressions. Pragmatic analysis helps users to uncover the intended meaning of the text by applying contextual background knowledge.

The goal of NLP is to accommodate one or more specialties of an algorithm or system. The metric of NLP assess on an algorithmic system allows for the integration of language understanding and language generation. It is even used in multilingual event detection. Rospocher et al. [112] purposed a novel modular system for cross-lingual event extraction for English, Dutch, and Italian Texts by using different pipelines for different languages. The system incorporates a modular set of foremost multilingual NLP tools. The pipeline integrates modules for basic NLP processing as well as more advanced tasks such as cross-lingual named entity linking, semantic role labeling and time normalization. Thus, the cross-lingual framework allows for the interpretation of events, participants, locations, and time, as well as the relations between them. Output of these individual pipelines is intended to be used as input for a system that obtains event centric knowledge graphs. All modules take standard input, to do some annotation, and produce standard output which in turn becomes the input for the next module pipelines. Their pipelines are built as a data centric architecture so that modules can be adapted and replaced. Furthermore, modular architecture allows for different configurations and for dynamic distribution.