Semantic Role Labeling (SRL) is a task within the field of Natural Language Processing (NLP) that involves identifying the predicate-argument structure of sentences. In other words, it aims to determine the basic who did what to whom, when, where, why, how, etc., structure of a sentence. This involves recognizing the verbs (predicates) in sentences and classifying the semantic roles of words or phrases related to these verbs (such as the agent, object, instrument, etc.).

The process of SRL includes identifying all predicates in a sentence, and for each predicate, identifying all the constituents that play a semantic role, and then classifying these roles according to a predefined set of role types. These roles are often based on a frame-based or thematic role theory, which defines roles like Agent (the doer of the action), Patient (the entity that the action is done to), Instrument (the entity used to do the action), and so on.

Semantic Role Labeling is crucial for various NLP applications because it provides a deeper understanding of the meaning conveyed in a sentence, beyond mere syntactic analysis. It is useful in tasks such as information extraction, question answering, summarization, and machine translation, where understanding the relationships between different parts of a sentence is essential for processing the information accurately.