

# Named Entity Recognition

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Named Entity Recognition (NER) is a subtask of Natural Language Processing (NLP) that aims to identify and extract entities from a given text such as names of people, organizations, locations, and dates. This is an important task in NLP as it helps to extract meaningful information from unstructured data.

The NER algorithm works by identifying patterns and rules in a given text to determine which words represent entities. It uses various techniques such as part-of-speech tagging, rule-based systems, and machine learning algorithms to identify and extract entities.

For example, consider the sentence "John works at Google in California". The NER algorithm would identify "John" as a person, "Google" as an organization, and "California" as a location.

NER is useful in various applications such as information retrieval, sentiment analysis, and text classification. For example, in information retrieval, NER can be used to extract information from news articles or social media posts to identify important entities such as companies, products, and people.

In text classification, NER can be used to identify entities related to a particular category or topic. For example, in a news classification task, NER can be used to extract entities related to politics or sports.

Overall, NER is a crucial component in many NLP applications and is constantly evolving with the advancements in machine learning and NLP techniques.