

Published October 30, 2020 | Version v1

Journal article

 Open

NLP Algorithms Endowed for Automatic Extraction of Information from Unstructured Free-Text Reports of Radiology Monarchy

Vaishali M.Kumbhakarna¹; Sonali B. Kulkarni¹; Apurva D.Dhawale²[Show affiliations](#)**Sponsor:** Blue Eyes Intelligence Engineering and Sciences Publication(BEIESP)¹[Show affiliations](#)

Natural Language Processing (NLP) Algorithms are the key factors for automatic information extraction from the unstructured free-text radiology reports. To extract clinically important findings and recommendations, various NLP algorithms are used. A rule-based NLP system is used in most of the automated IE applications in medical domain; whereas some applications are using Random Forest classifier, PageRank Algorithm, clustering algorithm, Conditional Random Fields (CRF) algorithm, and deep learning-based approaches. Some papers found with methods used for IE like, Support Vector Machines (SVMs), linear-chain conditional random fields (LC-CRFs), k-means or k-medoids algorithm, Affinity Propagation (AP) clustering algorithm, supervised machine learning algorithm and many more. Thus through this survey we can say that, NLP methods used to extract information, brings new insights into already known clinical evidences. It also helps to identify previously unknown treatment and causal relations between biomedical entities. Therefore NLP algorithms has empowered Radiology monarchy.

Files

[L80091091220.pdf](#)