SOCIAL NETWORKS WITH NATURAL LEARNING PROCESSING- EMPLOYBILITY OF KEY INFLUENCERS LEXICAL, SYNTACTIC AND SEMANTIC IN ENHANCING BUSINESS INTELLIGENCE

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ABSTRACT

We are living in the era of Artificial Intelligence. This is noticeably represented in this research. The application of NLP which is the combination of sarcastic, semantic usage in the social network domain. Turing Test is also cited in this research. The working of syntactic and semantic analysis is also explained in this research. These techniques will enhance the usage and makes better tomorrow in AI NLP Area.

Keywords – NLP; semantic analysis; Artificial Intelligence.

INTRODUCTION

NLP is part of AI commonly known as Artificial Intelligence in Computer Science field. AI [2] is especially popularas a superset of machine learning. NLP is identified with the correspondence between the PC (counterfeit) dialect and additionally the dialect utilizedby the homo-sapiens that isexceptionally unique and in addition normal. The relicof Natural Language Processing, startedfrom the 1950s. A very much eminent PC researcher, Alan Turing [3] built upa test in the year 1950. This test was termed as a "Turing test". The main aim of Alan Turing test was to get to know whether the machine can analyze like cleverly homo-sapiens or not.

In the below figure, A1 is an Artificial Intelligence System B1 is a human but as a player. C1 is the interrogator and also a human.

NLP is connected with different ideas, for example, Machine Learning and profound taking in, this is outlined in Fig.1.
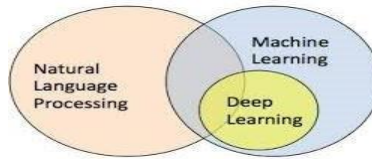
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Fig.1 Relation among NLP, ML and deep learning

AI is advance level of Machine learning which helps in learning technique for machine aspects with the usage.

A Chatbot is a perfect example of NLP and illustrated in Fig.2.

Fig.2 Chatbot assistant.

In the above output, Maya is the online assistance that appears and assist the user on the basis of question asked, it is more likely answers on the basis of training sets. there is a concept in NLP Chatbot i.e. pattern and observer, pattern checks for the question pattern and observer observes and reply for the questions.

ADVANCEMENT OF NLP

The Advancement of NLP is shown in Fig. 3

Fig3: Advancement of NLP

In the mid-1950 and 2010, lots of experiments and tests has been done and developed which are Georgetown experiment, micro worlds and ontologies.

FOUNDATIONS OF NLP

2 foundations of NLP are as follows-

• Indulgent of NL

• Originations of NL

in initial stage, the inputs transformed to essential and helpful techniques and examine different approach and components of speech.

There are three types of facts which causes confusions in the language

•Lexical confusion

•Syntactic confusion

•Referential Confusion

The words deal with confusion is lexical, in the other hand parsing procedure is deals by syntactical confusion and the referential technique confusion [8]. The instance of Referential confusion can be sonu went to anil and said i am hungry. In this case a human mind can easily understand that sonu is hungry but computer can't. in term of computer it must be sonu went to anil and said, i am hungry.

The 2nd phase contains the alteration of the demonstrations to the normal linguistic that is to be assumed by persons or homo-sapiens.
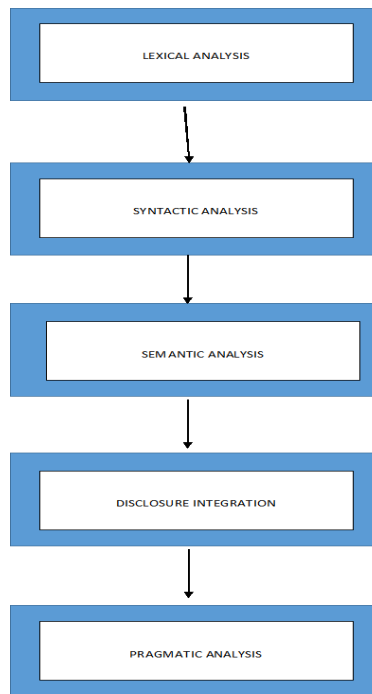
The 3 steps

•Manuscript Planning

•Sentence Planning

•Manuscript Realization

These 3 stages are the arrangements of the 3 disarrays said above. Content arranging manages the extraction of authority from the dominance base.

The second one manages the choice of fitting words and shaping successions of words. The last one manages the transformation of all procedure examined above into the real world.

NLP Flow Charts

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┌─────────────────────────┐
│    LEXICAL ANALYSIS      │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│   SYNTACTIC ANALYSIS     │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│    SEMANTIC ANALYSIS     │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  DISCLOSURE INTEGRATION  │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│   PRAGMATIC ANALYSIS     │
└─────────────────────────┘
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Following diagram which is mentioned below as **Fig.4**

RESEARCH BACKGROUND

1.   Lexical Analysis

The expression "Lexical" [9] is worried about the dimension of concordance. Specifically getting to the heart of the matter that is by taking a model in the field of person to person communication [10], how about we take the instance of Facebook, individuals use to post statuses on with the goal that their friends can watch that. It could be cheerful, miserable and furious or any sort of feeling or supposition, we are allowed to post any emotions that we feel. This can be communicated by the methods for words. Some model could be "I bought a new IPhone, it is amazing and I am happy", "Alas! My car broke down in an accident".

What a great appearance by India in UN election.one more win by Narendra Modi. It was a positive opinion. Opinion mining is a part of NLP.
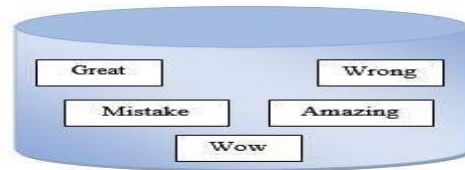
Fig.5 A lexicon sentiments example.

In the outline said over an example of assessment vocabularies are specified. Extraordinary, Amazing [0] also, Wow communicates delight and bliss while Wrong and Mistake communicates terrible emotions or assumptions.

2. Syntactic Analysis

This word is accountable for the syntactic relationship among areas. The PoS normally abridged as (POS) [11] expect a significant impact work in this syntactic circumstance. We take the example of Verb that are fundamental of two sorts that are a dynamic verb and inert verb. If we contemplate an unapproachable verb. If we consider a working verb, then its case could be "He tested". They are linguistically right yet being semantically fragile. A positive view point could be "Various Congratulations" and negative viewpoint could be, "He Killed". Each one of these points of reference could be displayed on social media.
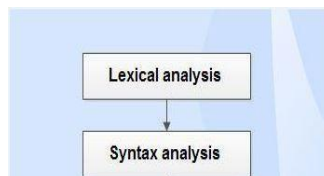

Fig.6 the analysis syntax.

In term of twitter it is not mandatory that the post written in twitter is always syntactically correct like subject then verb and then object. Many time tweets are inappropriate and noisy and not structured either, which causes problem.

3.   Semantic Analysis

The last technique that comes under amalgamation process is semantic analysis. Its meaning is connected with rationality and sense.
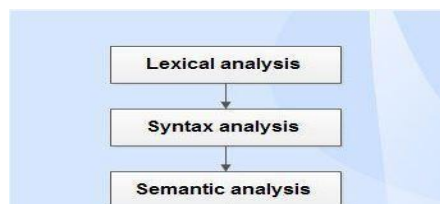

Fig.07 semantic analysis example

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In the aspect of social media, the semantics similarity has a major role. one term that meat here is contextual semantic, it means similar terms which has happened in homogeneous situations. which is told by "Wittgenstein" in 1953.

Fig.08 Positive meaning of words (Trojan horse)

If it is considered as negative, it could be malware, or threat, program etc.

Fig.09 Negative Meaning of words (Trojan horse)

The key point is that; it is seen that negative things become more viral as compared to positive things!

Some structure that has a place with Contextual Meaning Emotions/Sentiments additionally assumes a fundamental job in this situation. It very well may be delineated as few terms that are specified in factor tweets with comparative importance, rationales and feelings tend to frame groups. A delineation of this is portrayed in Fig.13.

Fig.10 Trojan horse and Spyware.

In this situation, the feeling of a groupingof words isapproved with the arrangementof words above them.

2. **Pragmatic Analysis**

For this situation, this present reality information in worry to phonetics [14] is fundamental. The successions of words are re-deciphered to check the precision of significance in the specified territory.

3. **Applications**

- • Natural language generation.

- • Speech Recognition.

- • Sentiment Analysis.

- • Question Answering.

CONCLUSION

The NLP is one of the measurements of Artificial Intelligence. It has contributed in the exploration area alone and in addition when in blend with ML and Deep Learning. Components and also advancement of NLP is likewise specified in this research. Presentation and in addition Turing Test is additionally portrayed in this paper. This will contribute in the innovative work part.

REFERENCES

[1]. Chowdhury, G. G. (2003). Natural language processing. Yearly evaluation of ist, 37(1), 51-89.

[2]. De Kleer, J. (1986). An assumption-based TMS. AI, 28(2), 127-162.

[3]. Turing, A. M. (2009). Calculating equipment and aptitude. In Analyzing the Turing Test (pp. 23-65). Springer, Dordrecht.

[4]. Goldberg, D. E., & Holland, J. H. (1988). GA and ml. Ml, 3(2), 95-99.

[5]. LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning.Nature, 521(7553), 436.

[6]. Rayner, K., & Duffy, S. A. (1986). Verbal difficulty and obsession periods in analysis: Belongings of term occurrence, verb difficulty, and verbal uncertainty. Retention & reasoning, 14(3), 191-201.

[7]. MacDonald, M. C., Pearlmutter, N. J., & Seidenberg, M. S. (1994). The verbal environment of syntactic uncertainty resolve. Mental evaluation, 101(4), 676.

[8]. Maes, S. H., & Neti, C. V. (2005). U.S. Patent No. 6,964,023. Washington, DC: U.S.Patent and Trademark Office.

[09]. Lenhart, A., & Madden, M. (2007).Social networking websites and teens: An overview.

[10]. Hengeveld, K. (1992). Parts of speech. Covered arrangement and position in a practical viewpoint, 29-55.

[11]. Deerwester, S., Dumais, S. T., Furnas, G. W., Landauer, T. K., & Harshman, R. (1990). Indexing by buried semantic examination. Paper of the American humanity for info science, 41(6), 391-407.

[12]. Attardo, S. (2010). Humorous texts: A semantic and practical examination (Vol. 6). Walter de Gruyter.