

False Position Sidestep

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With the advancement in technology and educational field, many changes and improvements are also done in the study of languages. The study of language is called linguistics and the person who studies languages is called linguists. There is too much research work done on other linguistics for the conversion languages in many different forms and symbols. Nearly three decades of advancement were based on the numbering of languages to understand the linguistic objects but after such three decades there were lots of changes made from there the start of language processing has started, e.g., if some one wants to count the alphabets and numbers like how many times they occur in the writing process it will be very difficult for the person to count down how it is possible if it appears many times to make it possible to count them in seconds or in that form of language which a person wants. After that much work was done on the languages and computation by statistical data this they called the computational linguistics past the first linguistic application was the machines translation this was very famous among the American s and other foreign countries they have invested much in linguistic computation first formation the machine translation.

This involves the text with meanings too. The machine translation was remains famous for many years and after that it is transformed to machine language programs in which the word-to-word description is given. The research report given by national academy of sciences in 1966 after that report there was the end of machine translation took place with the changes in computers and introduction of different sizes and shapes computers with more accuracy there is a change took place in natural language processing too at that time computers serve as the manipulating machines like there work is to manipulate the symbols by which it can easily represent the number. (Needham, 1959) Because English is most commonly known famous and spoken language in mainly all the countries that's why most of the language work done was related to English language one more reason for more works

took place on English was that there were much research work done by the Americans and the other European countries whose language is English so they research more in their language three things are very important in natural language processing these were speech, meanings and grammar.

This computational linguistics field was established in 1950s in America, which made possible to transform text from any language into English. For transformation of languages to one another the need of understanding both the languages arises that's why much development was also made in the field of linguistic studies the method of transforming languages needs grammars of both the languages which includes the grammar of word transformation its similarity with the other words and meanings. This computational linguistics is not the single field of study now with much research there is large development takes place in making the divisions of computational linguistics. The two subdivisions of computational linguistics made at that time these were parsing and generation deals with the taking of language and combines them. (Dover, 2003 pp. 231–232)

If someone talks about the relation of humans with algebra then surely he thinks that algebra is one of the famous methods through which the human relationship develops. It was the blocked language which didn't have the capability of involving much probability in the work. Due to the lack of grammatical work in that language these languages of the past are now not in use because of much development taking place in the making of systems with more technological advancement in the real world now computer systems are also made with more realistic approaches and more languages are formed which have much capacity of understanding languages. Much mathematical statistical and grammatical meanings for more research on natural language processing it is required having more knowledge of the outside world languages and different programming. It was the man interaction system in easy

meanings. It is hard for languages to describes many problems still these involves the major problems and sub problems these two combines to give the solution of a big problem it is related to understanding the human intelligence and comparison of human intelligence with the computer programming. It involves the AI complete problem that is the most difficult task in language settings. It is related to the intelligence problem the theory behind such problem is comparing the intelligence with the people. This was described by Fanyas Montalvo he involves the problems no completeness, complexity theory. (Springer, 1999, pp. 86-91)

First task which is involve in setting up of the problem is to transform the algebraic language in of the formal language to proceed further for manipulating the data, tables, graphics data with facts reasoning and the response to the task. It is also the provision of summary and translation of the text it requires some of the techniques which are most advance techniques for dealing with the different faces of languages these techniques involves syntax, semantics, discourse context and pragmatics.

One of the most important tasks for algebraic language processing now is the syntactic technique this involves some times when the meaning of the sentence is not fully evaluated through the written linear sentence but some times it may be from its structure. Now the formation of that language is necessary who can easily understand the explicitly and implicitly of the context this is called the contextual analysis. Extraction of any information provided is possible through the use of semantic analysis this also needs much more development to understand this problem in any other languages much work done on these phases are English language but the need other conversation and understanding in other languages is also necessary. These were not those tasks at which the theory of tasks for

computational languages ends for more advancement in natural language processing now much research is needed. (Ford, 1995)

As the systems are based on high technological works and with high knowledge settings, there is not an easy way to handle these systems there are much complexities involve in them these are those complexities which needs the proper solution otherwise the whole work will be lost. Some of the concrete problems, which are associated with the algebra language processing are the problem of written structure is grammatical information where two sentences were written and they both have the same grammatical structure but different meanings. Those sentences will not be understandable for the person until or unless he properly studies the behaviors of the thing which is discussed in the sentence and the meaning of words use in that language. The problem of interpretation as a single sentence can come in many different styles like one sentence has five to six writing styles these sentences where ever present are based upon the pars of speech. So the user if not have the knowledge of parts of speech he cannot easily detect the problem in sentence and ultimately will not understand which sentence is showing what these sentences are written in the same styles but have different structures. Expression matching problem is one of those problems which are counted as concrete problems for computer system. These are mapping of specifically phrases like a sentence may contain formula sequence of words and their systematic settings the formula present in the sentence contains names of chemical substances which are always in the short forms so its discrimination is hard. It is hard to understand in algebraic language processing where in formula the minus addition dash and ratio signs stands if the sentence is before writing fully extracted and checked it will be helpful for making less errors. Procedure descriptions representing and processing tables, which are the collection of many characteristics numberings and descriptions, is hard to understand for language processing.

Syntax and semantics interaction is necessary for every system to transform the language beside these the identification of concept is also much important.

The algebraic language processing can be easy through the statistical approaches. The speech tagging language modeling the prepositional phrase attachment spelling and grammar correction words segmentation for such findings there are many statistical models are present to understand the artificial intelligence in language settings. These involve n gram models probabilistic context free grammar.

From now the statistical methods for algebraic language processing is very common practice of many researchers. It involves various methods on conditional probability the elementary statistics, joint probability in the statistical natural language processing the methods are used which comprises of stochastic probabilistic and statistical in nature. These are applied because of the longer sentences which have more complexities then the simple one's methods of statistical natural language processing involves corpora and Markov models. Corpora, the word that is derived from the corpus linguistics whose meaning is study of language in symbols. It is the derivation of a group of parts of speech which represents many words and have different meanings too. These computation methods are one of the best research methods for considering the linguistics. (Kangshen, Crossley and Lun, 1999. p. 358)

Markov chain is one of the famous models in mathematics this Markov system has changing ability it is to change after one time so it is like probability which is not the future prediction is possible, for discussion on the natural language processing the statistical work and models by Markov have provided much knowledge to the researchers to build programming so for the linguistic matter one of the famous consideration is statistical language. The Markov chain consists of variations, reducibility, periodicity, recurrence, ergodicity, steady state

analysis and limiting distributions, the Markov chain with a finite state space and Markov chain with general state space.

Example:

Consider finding the root of $f(x) = x^2 - 3$. Let $\epsilon_{\text{step}} = 0.01$, $\epsilon_{\text{abs}} = 0.01$ and start with the interval $[1, 2]$.

Table 1: False-position method applied to $f(x) = x^2 - 3$.

| a | b | $f(a)$ | $f(b)$ | c | $f(c)$ | Update | Step Size |
|--------|-----|---------|--------|--------|---------|---------|-----------|
| 1.0 | 2.0 | -2.00 | 1.00 | 1.6667 | -0.2221 | $a = c$ | 0.6667 |
| 1.6667 | 2.0 | -0.2221 | 1.0 | 1.7273 | -0.0164 | $a = c$ | 0.0606 |
| 1.7273 | 2.0 | -0.0164 | 1.0 | 1.7317 | 0.0012 | $a = c$ | 0.0044 |

Thus, with the third iteration, we note that the last step $1.7273 \rightarrow 1.7317$ is less than 0.01 and $|f(1.7317)| < 0.01$, and therefore we chose $b = 1.7317$ to be our approximation of the root.

Note that after three iterations of the false-position method, we have an acceptable answer (1.7317 where $f(1.7317) = -0.0044$) whereas with the bisection method, it took seven iterations to find a (notable less accurate) acceptable answer (1.71344 where $f(1.71344) = 0.0082$).

Algebraic language information has made significant progress, in important ways, in the last many years. We have developed fairly comprehensive and robust tools like grammars and parsers, and have gained experience with applications including multilingual ones. We have been able not only to take advantage of the general advance in computing and communications technology but, more significantly, to exploit by-now vast text corpora to adapt our tools to actual patterns of language use.

Thus with much increase in knowledge in future it is not wrong to say that it is easy for every one to write and speech any language with the system and the system would be capable of answering to the questions research works grammatical errors removal statistical

works scientific works and official work all will be in the form of any language through algebraic language processing.

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