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IMPROVEMENT OF WORD SENSE DISAMBIGUATION WITH RULE BASED APPROACH

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ABSTRACT

The task of word sense disambiguation is to examine word tokens in context and specify exactly which sense of each word is being used. Word Sense Disambiguation (WSD) improves rule based machine translation in Anusaaraka. In this paper we describe one word have many ambiguities in respect of their meaning. How we remove these ambiguities with apply some methods, and also we show some results. Anusaaraka machine translation is use wsd rules for improve machine translation. Many words have multiple meanings, with respect to context. Word Sense Disambiguation task is determining the correct meaning or sense of a word with respect to context. WSD is regarded as an important research problem and is assumed to be helpful for application such as machine translation (MT) and information retrieval.

KEYWORDS

Word Sense Disambiguation, Machine Translation, Anusaaraka, wsd rule and dictionary.

1. INTRODUCTION

Firstly we are talking about Anusaaraka, because I am working on that project and specially working on Word Sense Disambiguation (Rule base). Anusaaraka is an English text to Hindi translation software. Fusion of traditional Indian shastras and advanced modern technologies is what Anusaaraka is all about. Anusaaraka derive its name from the Sanskrit word "Anusaran" which means "to follow". It is so called, as the translated Anusaaraka output appears in layers- that is a sequence of steps that follow each other till the final translation is displayed to the user.

2. WORKING OF ANUSAARAKA

In past decades Anusaaraka machine traditional done many things such as how to analyze a particular problems, how to categorize whole sentences in parts of speech, how to phrase the sentences, find out the ordering problems, wsd rules based problems and so on. But now day have some problems with this such as context related meaning, and some ordering problems.

Anusaaraka mainly work on word sense disambiguation rule based approach but it also use dictionary. Anusaaraka maintain many dictionaries such as default dictionary, multi-word expression dictionary, physics dictionary.

2.1. DICTIONARY BASED APPROACH

This approach is simple and less time consuming because it has word, category and meaning related. Dictionary not have any relation and one word have many Hindi meaning but always select first Hindi meaning for Hindi translation which is store in dictionary.

We take an example for word **product** –

word- product is noun category and its Hindi meaning like that in default dictionary "uwpAxa/uwpAxana/paXArWa/pariNAma/mAla/guNana/guNanaPala". As we show here always Hindi meaning will become uwpAxa because it is in first position. Dictionary Based approach gave good result when English word has only one meaning in particular category; otherwise we follow some other approach.

Many dictionaries used in dictionary based approach such as default dictionary, multi word expression dictionary, physics dictionary and so on. Priority basis this dictionary will be work, multi word expression have higher priority because it's have compound word and produce single Hindi meaning with respect to those words (two or more than two words). If multi word expression dictionary have lower priority that means first come Hindi meaning from default dictionary in particular word if that Hindi meaning is not match the context after that multiword expression dictionary will not be fire because it's have a Hindi meaning but it is not necessary that meaning match from the context.

2.2. RULE BASED APPROACH

This approach based on relation and this rule also cover all the senses of particular word and cover all category which root are same. In this approach have all senses but how particular rule fire with respect to context sense, its solution is salience. Salience decides the rule fire on first with respect to context. Which rule has more relation whose salience is high and default rule not have any salience. All wsd word file have default rule because if all rules not cover those senses with respect to context so at least this default rule will be fire. When we built a many rules in a file so we try to use least salience because high salience take more time. Default sense is play important role in rule based approach because at least this rule will be fire if no any rule fire or not any senses match from the context.

If we are not define default rule in file and also all the senses not match from the context then it will go to dictionary and take more time for giving Hindi meaning because firstly search in wsd rule then after search in dictionary. Rule base file cover all senses such as single word meaning, compound expression meaning and so on.

2.3. EXAMPLE FOR CONTEXT RELATED MEANING PROBLEM

We take the example of word "Product" multiple meaning have product such as uwapAxa, guNanaPala, paxArWa, pariNAma etc. These are in wx notation. These meaning are with respect to noun context. We have one solution for every meaning with respect to sentence context.

Example: Taken together, the product of mass and velocity, that is momentum, is evidently a relevant variable of motion.

Category with respect to sentences: Verb adverb determiner noun preposition noun conjunction noun wh-determiner verb noun verb adverb determiner adjective noun preposition noun.

Manual Hindi Translation: sAWa - sAWa lene para, saMhawi Ora vega kA guNanaPala, arWAwa saMvega, prawyakRa rUPa se gawi kA eka prAsafgika cara hE .

Machine transaction: jo vaha gawi hE, eka sAWa ll hul, parimANA Ora vega kA, vaha guNanaPala gawi kl spaRta rUPa se eka upayukwa parivarwanaSlla vaswu hE.

Sentence: This product can be used on wet or dry hair.

Category: Determiner noun verb preposition adjective conjunction adjective noun

Hindi Translation: yaha utpAwa upayoga kiya jA sakawA hEM gile ya sUKe keSa pera.

Word product has many senses with respect to context, default dictionary cover seven senses and our wsd rule cover four senses which are uwapAxa, guNanaPala, paxArWa and pariNAma. Because these are cover most of the senses of the context.

FIGURE 1: WORD "PRODUCT" HAS DIFFERENT MEANING WITH MACHINE TRANSLATION

2.1.A	Taken	together, the	product	of	mass	and	velocity, that	is
2.1.B	-	-	-	-	-	-	-	-
2.1.C	लिया~हुआ[-]~{@en}	एक~साथ,	उत्पाद^परिणाम{0}	@of{->का}	परिमाण^समूह{0}	और	वेग{0},	उतना/कि/वह[निर्धारक~अर्थ~में]/वह/जो/जिसे
2.1.I	ले{या हुआ}	एक साथ,	वह गुणफल	--> का	परिमाण	और	वेग,	वह है
2.1.K	ली हुई	एक साथ,	वह गुणफल	~	परिमाण	और	वेग का,	वह है

momentum,	is	evidently	a	relevant	variable	of	motion.	2.2.A	Carbon	dioxide
-	-	-	-	-	-	-	-	-	-	-
संवेग{0},	होना~{@s}	जाहिरी~तौर~पर-	उपयुक्त[-]	परिवर्तनशील/परिवर्तनशील~वस्तु[-]	@of{->का}	प्रवर्तन^गति{0},	2.2.C	कोयला/कार्बन{0}	डा	
गति,	है	स्पष्ट रूप से	एक प्रासङ्गिक	परिवर्तनशील वस्तु	--> का	गति,	2.2.I	-	कार्बन डाइआक्साइड	
गति,	है	स्पष्ट रूप से	एक प्रासङ्गिक	परिवर्तनशील वस्तु	~	गति की,	2.2.K	-	कार्बन डाइआक्साइड	

is	a	waste	product	produced	by	the	burning
-	-	-	-	-	-	-	-
होना~{@s}	-	व्यर्थ/क्षय/नष्ट~करना[-]{0}	उत्पाद^परिणाम{0}	उत्पन्न[>प्रस्तुत]~करना~{@ed/@en}	समीप/पास~में/साथ~में^द्वारा	-	जलने~का~घाव/जलना/जलाला~{@ing}[-]
कई	एक	व्यर्थ	पदार्थ	उत्पादन कर	--> के द्वारा	-	दाहक
कई	एक	व्यर्थ	पदार्थ	उत्पादन किया हुआ	~	-	दाहक के द्वारा

of	food.	2.3.A	This	product	can	be	used	on	wet	or
-	-	2.3.B	-	-	-	-	-	-	-	-
@of{->का}	खाना{0}{सं.}	2.3.C	यह[-]{0}	उत्पाद^परिणाम{0}	सकना{0}/कैन	होना{0}	उपयोग^प्रयोग/भोग/सेवन~{@ed/@en}	@on{->पर}	गीला/वर्षा^गीलापन[-]{0}	या
--> का	आहार.	2.3.I	यह	उत्पाद	-->	-->	उपयोग कर{या जा सकता है}	--> पर	गीला	या
~	आहार के.	2.3.K	यह	उत्पाद	--	--	उपयोग किया जा सकता है	~	गीले	या

dry	hair.	2.4.A	As	part	of	our	continuing
-	-	2.4.B	-	-	-	-	-
सूखा/शुष्क/सूखना/सूखाना[-]{0}	केश{0}	2.4.C	जैसा^चूँकि	भाग-{दो~खण्डों~में~}/विभक्त~होना1[>विदाई]{0}	@of{->का}	हमारा-	जारी~रहना~{@ing}
सूखा	केश.	2.4.I	--> के जैसा	भाग	--> का	में	जारी रह
सूखे	केश पर.	2.4.K	~	भाग के जैसा	~	हमारे	जारी रहता हुआ

The above figure show that product have many meaning with respect to context. It is mainly shows three meaning which are- uwpAxa, guNanaPala and paxarWa.

2.3.1. COMPOUND EXPRESSION

If we are talking about compound expression then we used the concept of affected-id and affected-id otherwise they produce two different Hindi meaning which have its own sense. So we replace its own sense we use that ids. In this concept one word is affected by another word, which word affected by another whom is known as affected-id and which word is affecting that word known as affecting id.

For example: we take a example of product line which compound Hindi meaning is uwapAxa_ki_xiSA, but when we are talking its single meaningAxa_ki apply the concept of affected-id and affecting-id then its Hindi meaning like that "uwapAxa" for product and "paMkawi" for line.

Here we showed how affected-id and affecting-id play important role to give the suitable Hindi meaning or compound expression. Now a new problem for us when we define these compound meaning in compound expression dictionary as well as wsd rule, then how its decide where it go firstly in dictionary or wsd rule. Solution of this problem is programmer, programmer decide where it look first if programmer decide it firstly look in wsd rule file so it took that Hindi meaning if compound word is there otherwise look in dictionary.

2.3.2. VERB

We are taking an example of verb "prepare". In some sentences its meaning is wEyAra karaNA and some sentences have its meaning banANA. But how we disambiguate actual meaning of prepare. We have only one solution of that word, we analyze the context and with the help of context we decide the meaning. When we define the Hindi meaning in our rules then we put only root meaning such as wEyAra_kara because this is the meaning of verb so its vary sense of sentences. When we talking about future tense then its Hindi meaning will be wEyAra_kareGA, in past tense wEyAra_kiya or wEyAra_kara_cuka, in presnt tense wEyAra_kara_raha and so on. The meanings of verb vary tense to tense because we have written a program for verb in Anusaaraka. The same word used as different parts of speech. Except verb all the parts of speech have complete Hindi meaning (not only root meaning), for example word product has Hindi meaning UwpAxa, guNanaPala, paxArWa etc.

Hera we discuss one more and very interesting thing, when combine two words gave one Hindi meaning then we apply the rule as affecting id and affected id otherwise they gave two different meaning with respect to that word which can be wrong.

2.4. NOUN

Noun gender is the also problem in word sense disambiguation, Our Hindi sentences how decide this sentences talking about masculine or feminine or nature gender. Its solution is subject of the context.

Subject of the context decide its gender.

Example: She writes an essay.

Vaha eka nibanXa liKawl hEM.

He writes an essay.

Vaha eka nibanXa liKwA hEM.

They write an essay.

Ve nibanWa liKawe hEM.

2.4.1. THE NOUN: NUMBER

A noun that denotes a person or thing, is said to be in the singular number as-

Boy eats a mango.

LadFka Aama KawA hEM.

A noun that denotes more than one person or thing is said to be in the plural number.

Boys eat mangoes.

LadFke Aama Kawe hEM.

Again we are seeing subject of sentences decide the number of noun.

2.5. ORDERING RELATED EXAMPLES

I. We shall now describe some of these experiments.

Manual translation: hama unameM se kuCa prayogoM kA varNana yahAz kareMge.

Anusaaraka : hama prayoga inameM se kuCa aba varNana karezge.

We are easily seeing that in this example Anusaaraka not gave meaning of experiment (prayoge) in exact place.

II. I learn about the stars, the trees, the birds and the animals.

Manual translation: mEM wAroM ke bAre meM, peda, cidiyOM Ora paSuoM ke bAre meM sIKawA hUz.

Anusaaraka : mEM wAroM ke bAre meM, peda, cidiyOM Ora paSuoM ke bAre meM sIKawA hUz.

Second example gave the correct Hindi translation such as manual translation.

So, we say that Anusaaraka mostly gave the correct Hindi translation. Improvement of Anusaaraka is going on day by day.

2.6. ANALYZE THE SOME ENGLISH SENTENCES

In serial no.1 we had collect 50 English sentences related to some Hindi story, These sentences have total 894 words and below result so that wsd problem is very less. Serial no. 2 define for 100 physics sentences and serial no. 3 define sort story sentences and sentences also small so our translation is more accurate for these small sentences.

TABLE 1: ANUSAARAKA MACHINE TRANSLATION RESULT

Serial no.	Sentences	Total Words	wsd Problem on words	tam problem on words	Error % on wsd Problem	Error % on tam Problem
1	50	894	26	69	2.9082	7.7181
2	100	1781	88	71	4.9410	3.9865
3	121	960	14	35	1.4583	3.6458

As we are seeing the some result which given by Anusaaraka English text to Hindi machine translation. We collect some English sentences then we ran these sentences in Anusaaraka and then we are showing here output and also we get this machine translator is more accurate and they give mostly correct Hindi translation.

In simple Hindi story have tam problem more than word-sense disambiguation problem.

3. CONCLUSIONS

Anusaaraka English Hindi machine translation improvement is very firstly. In the coming days its performance is too good. When we analyze some sentences then we find this machine translation give near about 90% to 92% correct result, but when we taste some another sentences then it gave 96% to 98% correct result which result we showed in above table. This variation depends on words and sentences. So we can say that in upcoming days Anusaaraka Machine Translation will give accurate result.

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REFERENCES

1. Speech and Language Processing an Introduction to Natural Language Processing, Computational Linguistics, and Speech Recognition, by Denial Jurasky and James H. Martin.

WEBSITES

2. anusaaraka.iit.ac.in
3. Sanskrit.inria.fr/DATA/wx.html
4. wikipedia.org/wiki/Word-sense_disambiguation

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