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THE ACCURACY OF GOOGLE TRANSLATION SYSTEM IN TRANSLATING REFERENTIAL PRONOUN (THAT) WITHIN THE LITERARY TEXTS

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Abstract:

The demand for language translation has greatly increased in recent times due to increasing international communication and the need for information exchange. Most material needs to be translated, including scientific and technical documentation, instruction manuals, legal documents, textbooks, publicity leaflets, newspaper reports etc. Some of this work is challenging and difficult but mostly it is boring and repetitive and requires consistency and accuracy. It is becoming difficult for professional translators to meet the increasing demands of translation. In such a situation the machine translation can be used as a substitute.

This study offers a brief but condensed overview of Machine Translation (MT). It aims at identifying the percentages of Google translation system in translating referential pronoun (that) within the literary text. The sample of the study consists of three literary texts. The study used percentages to detect the accuracy of Google translation system. The results showed that percentage of accuracy Google translation is 100% in translating referential pronoun (that) within the literary texts. It's recommended that Google translation system might be used formally by English teachers and translators in order to get benefit from the time and the cost inside class and translators centers and educational subjects.

Key words: Google, Machine Translation, Human Translation.

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1. Introduction

Vilar, et.al (2006:12) refer that morphology argues that the degree of the output of inflectional morphological rules of the TL. Inflections characteristically convey information about number. Hikmit (2004) in his turn, states that many performance measures like Word Error rate, Position Independent Word Error Rate and the Bilingual Evaluation Understudy (BLEU) and National Institute of Standard and Technology (NIST) scores are widely used and they supply a useful tool for relating diverse systems and to assess developments within a system. Thus, the clarification of all of these procedures is not at all clear and the identification of the most prominent source of mistakes in a given system by these measures alone is not possible. As well as, some analysis of the generated translations is needed in order to categorize the chief difficulties and to concentrate on hard work of the research.

Badar, et.al (2008) presents "Factored Translation Models" as an postponement to phrase-based numerical machine translation models. Factored models permit the addition of supplementary morphological features, such as, gender, number, etc. at the word level on both source and marked sides. The tighter combination of such features is examined to allow more explicit modeling of the morphology, and is better than using pre-processing and post-processing techniques.

Not much previous researches detected the accuracy of Google translation in translating referential pronouns (that) within the literary texts. This research tries to detect the Google's accuracy in translating referential pronoun (that) within the literary text to avoid translating randomly and inaccurate translation and getting benefit from time and cost in class.

This research aims to detect the accuracy of Google machine translation in translating referential pronoun (that) within the literary texts.

2. Google's Accuracy in Translation

Zantout & Guessou (2000: 117, 144) investigate that the various uses of MT systems, together with MT suggests that translation of texts that are scientific, technical documents and textbooks, industrial and business concern, a poster chance that is employed within the sake of promoting merchandise abroad, sort of a technology that may alter non-native speakers of English into district of the net, as an instrument that assists any social group preserve its culture and gift it to people. MT signifies a good platform seeking for computer science analysis, data process, and linguistics.

Guidere (2001:1) says that MT isn't associate objective or a importance. It's rather a latent goal of the work being administrated, So, the researchers believe that developing helpful applications will enable them to achieve this aim ultimately. MT is, in reality ,a secondary issue, a scenario that hinders the speedy development of effective systems. There square measure presently only a limited applications for MT into and from Arabic, particularly compared with different major languages like English, and other languages.

Papineni, et. al (2002:10) assess MT and claim that human assessments of MT are in depth however pricey. Human evaluations will take months to complete and involve human labor that can't be reused. The researchers suppose a way of automatic MT analysis that's fast, cheap, and language - independent that relates tremendously with human analysis, which has very little incremental cost per run.

Attia (2002: 5) mentions MT as a way of employing a laptop to translate an individual's language into another human language as not (or with minimal) human intervention. it's the plan to build the PC acquires the type of data that translators get to achieve their effort. the pc must be supplied with the suitable procedures and routines to complete the interpretation method. With success undertake a translation task, human translators got to have four forms of knowledge:

1) information of the language (lexicon, morphology, syntax, and semantics) so as to grasp the means of the supply text 2) information of the target language (lexicon, morphology, syntax, and semantics) so as to provide an evident, acceptable, and well-shaped text. 3) information of the relation between supply and target language so as to be ready to transfer lexical things and grammar structures of the language to the closest matches within the target-language. 4) information of “the subject matter”. This permits the translator to grasp the particular and discourse usage of word.

Shalaan (2004: 2) states that MT is the space of knowledge technology and applied linguistics handling the translation of human languages like English and Arabic. With globalization and increasing trade, demand for translation is ready to grow. Technology is applied on technical translation so as to enhance one or each of the subsequent factors: 1) Speed: Translation by or with the help of machines is faster than manual translation, and 2) Cost: laptop aids in translation will scale back the price per word of a translation. Additionally, the employment of MT may end up in enhancements of quality, significantly within the use of consistent language at intervals a text or for a specific reasonable consumer.

Hannona (2004) states that morphology indicates that the degree to that the output respects (inflectional) morphological rules of the target language. Inflections generally carry data concerning (number, gender, case, aspect, etc.). This quality is particularly necessary for extremely inflected languages like Arabic. Chiang, et.al (2005) get wind the a replacement analysis methodology, the researchers are intended partly by recent studies suggesting that word rearrangement track overall shapes with regard to syntax, though there are remains a high degree of flexibility. It means that in an exceedingly comparative analysis of two MT systems, it's going to be helpful to appear for syntactical patterns that one system captures well within the target language and also the different doesn't, employing a syntax based mostly metric. Gouti (2006:4) claims that MT output might be judged by humans to produce the conception of the system's performance. This cannot be the case, therefore the necessity for an inexpensive and quick thanks to judge MT systems. All metrics given below have faith in variety of reference translations to that the MT output is associated. This doesn't mean that everyone texts to be translated should have reference translations– solely benchmark texts do.

Farewell (2006) claims that a significant outcome of US Government funded MT creativity within the early 1990's was the event associate in nursing analysis methodology that would compare system achievement on comparable tasks, the interpretation of texts in an exceedingly common genre (namely, news articles) and of the same length.

Vilar & Duharo (2006: 97) states that in many presentation measures for analysis MT and rumored that the analysis of automatic translation output could be a troublesome task. Many performances measure like “Word Error rate, Position” freelance “Word Error Rate”, Bilingual analysis understudy cheese and National Institute of normal and Technology bureau scores square measure wide use and supply a great tool for examination completely different systems and to gauge enhancements at intervals a system. However, the interpretation of all of those measures isn't the least bit clear and also the identification of the foremost outstanding supply of mistakes in a very given system mistreatment these measures alone isn't attainable. Therefore, some analysis of the generated translation is required to spot the most issues and to specialize in the analysis efforts. This space is but principally unknown and few works have restricted it.

Uszkoreit (2007) reports that ranking the translations of a sentence includes a double scientific goal: foremost, it's attainable to use human ranking to evaluate but well

the machine-driven analysis works, therefore it's useful to appear at that metric for manual analysis is that the foremost representative of the accuracy and quality of a translation. Evaluators for this task have merely to \ rank each whole sentence translation from Best to Worst relative to the other picks (ties unit allowed)": this could be the only real instruction given by financial unit Matrix organizer.

Chung-line, S (2007:1) claims that:

“MT-based project of text kinds to check if students can recognize distinctive linguistic features of text types with MT error analysis, and if they can understand the significance of text types for the performance of machine translation and human editing/translation”

Vilar & Leuch (2007:97) compare the output of MT systems and examine that for the evaluation of 2 MT schemes, a group of translated sentence pairs is chosen. Each of those pairs contains the translations of a selected sentence from the two systems. These structures contain a two-fold purpose: on the one hand it simplifies the choice procedure for the judges, as in most of the cases the choice is kind of natural and that they don't have to be compelled to assume expressly in terms of fluency and adequacy. On the other hand, one ought to detain mind that the ultimate goal of associate MT system is its utility for a person's user, that is the reason the researchers don't wish to impose artificial constraints on the analysis procedure.

Badar, et.al (2008:4) investigate that a number of works on translating from English to alternative morphologically difficult dialects Koehn and Hoang (2007) gift Factored Translation Models as an extension to phrase-based applied mathematics MT models.

John, et.al (2009:46) study the problems that are encountered MT and claim that as problematic as high-quality MT systems resolve be to create, it's conjointly difficult to gauge them faithfully. In engineering a system, researchers sometimes have some methodology of testing the system to check if it gets higher over time. System-internal testing strategies are called measures of performance. So, will the researchers have a tendency to appraise MT output? A binary call of excellent versus unhealthy is just too coarse and subjective.

Typical methodology of analysis a decade a gone was to keep up an inventory of check sentences and to depend on human judgments to see whether or not the proportion of

excellent translations enlarged or diminished when a considerable system amendment.

Current strategies are faster, instead of manually judgment translation outputs, a collection of trustworthy reference translations is ready prior to, and therefore the MT output is automatically scored against the reference translations. The sidebar titled “Machine Translation Evaluation” describes range of; the newer analysis tools referring once more to the MT output; the researchers note that the distinction between the 2002 output and the 2004 output looks like over a strictly quantitative distinction within the number of properly translated word sequences.

Specia, et.al (2009) distinguish the analysis of MT ,that the notion of “quality” in MT will have totally different interpretations reckoning on the supposed use of the translations (e.g., fluency and adequacy, post-editing time, etc.). notwithstanding, the assessment of the standard of a translation is generally done by the user, UN agency has to browse the interpretation and therefore the supply text to be able to choose if or not it's an honest translation . This is often an awfully time intense task and will not even be potential, if the user doesn't have information concerning the language.

Therefore, mechanically assessing the standard of translations made by MT systems may be a crucial drawback, either to filter the inferiority ones, e.g. to avoid skilled translators disbursement time reading / post - editing dangerous translations, or to gift them in such how on create end-users tuned in to the standard. This task, noted as

Confidence Estimation (CE), {is concerned |cares |thinks concerning |worries is bothered} about predicting the standard of a system's output for a given input, with none info concerning the expected output. MT is viewed as a dual organization drawback (ii9987rdddddBlatz et al., 2003) to differentiate between "good" and "bad" translations. So, it's going to be tough to search out a transparent boundary between "good" and "bad" translations and this info might not be helpful in bound claims. The scholars of this filed differentiate the task from that of MT analysis by the necessity. Moreover, a final goal of MT analysis is to match a MT to reference translation(s) and supply a high quality score that reflects however shut the 2 translations square measure. In CE, the task that has some values of the interpretation given solely info concerning the input and output. The previous studies concentrate on MT systems generally but this research focuses on Google's translation system for referential pronoun (that) within the literary texts.

3. Types of Machine Translation (MT)

Nichole (2018: 25) mentions, that there are four types of machine translation– **Statistical Machine Translation (SMT), Rule-based Machine Translation (RBMT), Hybrid Machine Translation, and Neural Machine Translation.** But, before we explore these four, let's a get a few things straight.

You see, machine translation is primarily a tool that helps marketers/translators achieve a goal. It is not a replacement for the older systems of translation. Rather, it's an enhancement. For instance, in a traditional localization cycle, we encounter what is called the TEP phase. TEP here stands for 'translate, edit, and proof.'

Now, in a TEP cycle, the role of machine translation starts and ends with 'T,' which is 'translation.' The rest of the work, which is editing and proofing, still needs to be carried out by professional translators and language experts.

But, the goal is still the same, irrespective of which approach you follow. But, machine translation is still highly capable when it comes to generating savings, which is a benefit that most wouldn't want to miss out on.

Plus, the sheer volume of content that needs to be processed and managed out there necessitates the need for unique technological solutions. To make things even more complicated, the turnover time today is drastically low. Human effort simply will not cut it. Integrating machine translation into the localization strategy is a must now. There is no room for choice.

3.1 Statistical Machine Translation (SMT)

It works by referring to statistical models that are based on the analysis of large volumes of bilingual text. It aims to determine the correspondence between a word from the source language and a word from the target language. A good example of this is **Google Translate.** Now, SMT is great for basic translation, but its greatest drawback is that it does not factor in context, which means translations can often be erroneous. In other words, don't expect high-quality translations (Ibid: 26).

3.2 Rule-Based Machine Translation (RBMT)

RBMT, on the other hand, translates on the basis of grammatical rules. It conducts a grammatical analysis of the source language and the target language to generate the translated sentence. However, RBMT requires extensive proofreading, and its heavy dependence on lexicons means that efficiency is achieved after a long period of time (Ibid: 26).

3.3 Hybrid Machine Translation (HMT)

HMT, as the term indicates, is a blend of RBMT and SMT. It leverages a translation memory, making it far more effective in terms of quality. However, even HMT has its share of drawbacks, the greatest of which is the need for extensive editing. Human translators will be required (Ibid: 27).

3.4 Neural Machine Translation (NMT)

NMT is a type of machine translation that depends on neural network models (based on the human brain) to develop statistical models for the purpose of translation. The primary benefit of NMT is that it provides a single system that can be trained to decipher the source and target text.

As a result, it does not depend on specialized systems that are common to other machine translation systems, especially SMT (Ibid: 27).

4. Machine vs. Human Translation

The long-running debate of machine vs human translation refuses to go away. This is partly because technology improves every year and the quality of translation it offers is constantly rising. The advantages of machine translation generally come down to two factors: it's faster and cheaper. The downside to this is the standard of translation can be anywhere from inaccurate, to incomprehensible, and potentially dangerous (more on that shortly) (Internet: 2016).

4.1. Advantages and Disadvantages of Machine Translation

4.1.1 Advantages of Machine Translation

1. Many free tools are readily available (Google Translate, Skype Translator, etc.).
2. Quick turnaround time.
3. You can translate between multiple languages using one tool.
4. Translation technology is constantly improving.

4.1.2 Disadvantages of Machine Translation

1. Level of accuracy can be very low.
2. Accuracy is also very inconsistent across different languages.
3. Machines can't translate context.
4. Mistakes are sometimes costly.
5. Sometimes translation simply doesn't work.

4.2. Advantages and Disadvantages of Human Translation

4.2.1. Advantages of Human Translation

1. It's a translator's job to ensure the highest accuracy.
2. Humans can interpret context and capture the same meaning, rather than simply translating words.
3. Human translators can review their work and provide a quality process.
4. Humans can interpret the creative use of language, e.g. puns, metaphors, slogans, etc.
5. Professional translators understand the idiomatic differences between their languages.
6. Humans can spot pieces of content where literal translation isn't possible and find the most suitable alternative.

4.2.2. Disadvantages of Human Translation

1. Turnaround time is longer.
2. Translators rarely work for free.
3. Unless you use a translation agency, with access to thousands of translators, you're limited to the languages any one translator can work with.

5. Methods of the Study

5.1. Instrument of the Study

Ten words have chosen randomly from different literary texts, they are translated by Google translation system from English into Arabic in order to detect percentage of the accuracy of Google translation system in translating referential pronoun (that).

5.2 Experimental Design

The researchers have chosen ten words carrying referential pronoun (that) from different literary texts and they were translated by Google translation system from English into Arabic, as shown in the table (1) below and their percentages in table (2):

Table (1)

Referential Pronoun (that) from Different Literary Texts Translated by Google Translation System from English into Arabic

The Sentences	Google Translation	Acceptable Translation	The Percentage of Accuracy
proclaiming sentences of death to any that renew the fighting	معلنا أحكاما بالإعدام على أي من تلك التي تجدد القتال	معلنا أحكاما بالإعدام على أي من تلك التي تجدد القتال	Acceptable
that would fain lay knife aboard	التي من شأنها أن تضع السكين على متنها	التي من شأنها أن تضع السكين على متنها	Acceptable
that it would do you good to hear it Rom	أنه سيكون من الجيد أن نسمع ذلك روم	أنه سيكون من الجيد أن نسمع ذلك روم	Acceptable
I know that Shakespeare always uses poetic devices and had a rhythm in his plays,	وأنا أعلم أن شكسبير يستخدم دائما الأجهزة الشعرية وكان إيقاع في مسرحياته،	وأنا أعلم أن شكسبير يستخدم دائما الأجهزة الشعرية وكان إيقاع في مسرحياته،	Acceptable
I tell her that Paris is the proper man	أقول لها أن باريس هي الرجل المناسب	أقول لها أن باريس هي الرجل المناسب	Acceptable
second wife is quite determined that her spoiled and not	زوجة الثانية هي مصممة تماما أن ابنها مدلل وليس باهرا جدا،	زوجة الثانية هي مصممة تماما أن ابنها مدلل وليس باهرا جدا،	Acceptable

too			
Tony Lumpkin, who is there as usual with his cronies, conceives the idea of persuading the young men that they have lost their way and will have	توني لومبكين، الذي يوجد كالمعتاد مع زملائه، يتصور فكرة إقناع الشباب بأنهم فقدوا طريقهم وسيضطرون لقضاء الليل	توني لومبكين، الذي يوجد كالمعتاد مع زملائه، يتصور فكرة إقناع الشباب بأنهم فقدوا طريقهم وسيضطرون لقضاء الليل	Acceptable
Neither young Marlow nor Squire Hardcastle senses that both are victims of a hoax and the squire is much incensed at the bold and impudent behavior of his friend's son	لا يروي الشاب مارلو ولا سكوير هاردكاستل أن كلا من ضحايا خدعة والسكوير هو كثيف جدا على السلوك الجريء وغير المقنع من ابن صديقه	لا يروي الشاب مارلو ولا سكوير هاردكاستل أن كلا من ضحايا خدعة والسكوير هو كثيف جدا على السلوك الجريء وغير المقنع من ابن صديقه	Acceptable
This pair agree to keep Marlow in ignorance and pretend that Constance and Kate simply happen to be stopping the night .at the inn	هذا الزوج يوافق على إبقاء مارلو في جهل ويدعي أن كونستانس وكيت يحدث ببساطة أن يوقف الليل في المنزل.	هذا الزوج يوافق على إبقاء مارلو في جهل ويدعي أن كونستانس وكيت يحدث ببساطة أن يوقف الليل في المنزل.	Acceptable
It is not surprising, therefore, that later in the evening when he sees her going about the house in the plain house dress her father insists on	لذلك ليس من المستغرب أنه في وقت لاحق من المساء عندما يرى لها الذهاب في المنزل في اللباس منزل عادي بصر والدها على	لذلك ليس من المستغرب أنه في وقت لاحق من المساء عندما يرى لها الذهاب في المنزل في اللباس منزل عادي بصر والدها على	Acceptable

Table (2)

Percentages of the Accuracy for Translating Referential Pronoun (that) by Google System

Number of words	Acceptable Translation	Wrong Translation	Percentages of acceptable
10 words	10 words	None	100 %

4.3 Statistical Method

The results shown that the percentage of the accuracy of Google translation system, 10 words are translated and they are acceptable. These results explain that the percentage of the accuracy of translation in translating referential pronoun (that) is acceptable as percentage 100%.

5. Conclusions

In the light of the results obtained, the following conclusions can be drawn:

1. The propability of applying google translation system in the schools and educational constitutrions.
2. The effeciency of Google translation system increases performance of students' translation from English into Arabic.
3. The easiness of learning English translation by using Google translation system.
4. Pupils will not learn translation well without using Google translation system.
5. Using MT saves times and efforts when translating between two languages.
6. Human translation is always the best than machine translation being more accurate.

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