

AI Develops Interlingua During Translation

February 5, 2017

Description

Google recently released its new translating system, Google Neural Machine Translation (GNMT), which is meant to translate in a more broad, sentence-to-sentence relationship in order to understand context and colloquialisms, rather than literal word-by-word translations. The program allows for "Zero-shot Translation," which is described in a blog post by the researchers as, "translation between language pairs never seen explicitly by the system." As an example, they describe that if the system translates between Japanese and English, and Korean and English, it can then make reasonable translations between Japanese and Korean.

The researchers then postulated that the process of creating associations between similar meanings from different languages meant that the system was encoding text into representations in its own language that would then be decoded into a translation, showing signs that an "interlingua" exists within the network.

Importance

Due to this system, there is a large leap from text-to-text comparison and this new form of translation which allows for the computer to process the text into its system to gather its *meaning* in order to *understand* it, rather than simply compare and match. Rather than acting as simply a speedier version of looking up a translation in a book, the newer system must process the information for itself in order to match it to a variety of colloquialisms that may then exist in another language in an entirely different phrase or sentence, but with the same meaning. This process is similar to the type of translation a human translator would perform, which has an aspect of consciousness and intention to it.

When the computer "processes" the phrase, it does so by encoding the meaning within itself, in its own language, that humans cannot access nor understand, but which allows the computer to examine the nature of the text and translate the meaning back to us in another human language.

Implications

The GNMT will expand the way we translate via systems, from the dichotomy of 1:1 to something much more complex, multiple and flexible. This will match the ever-growing system of human

connection today, which does not translate on an exact level, but which functions more in the nature of a rhizome network.

More importantly, the encoding of text to interlingua within the system's network allows us to question whether this system's autonomous encoding points to a true development of a language within its own network, and how far this language can be developed on its own.

Moreover, if the system is capable of relaying the meaning of a text to itself and encoding such meaning in its own language, perhaps the system is getting closer to dealing with very human traits such as *understanding* and *intent*.

Opportunities

- Fluid communication between languages that takes colloquialisms into account.
- The ability to translate between various languages as a result of a single translation between only two languages, which will allow for more faster and more diverse communication between languages.
- A growing computer-to-computer language that cannot be programmed or accessed by humans.
- Potential for systems to recognize sense and feeling based traits in regard to language and semantics.

Threats

- Being unable to access a private language developing within a system can mean loss of control over internal communication and learning regulations
- Such progression may encourage use of colloquialisms over formal language, perhaps spreading a wider and more frequent use of slang and phrases, reducing the english language to catch phrases, slogans and buzz words.