General introduction to language

Logic of formal language

Subjectivity in language

Experience, how it effects the use of language, and the role of unsupervised learning in artificially intelligent language

Morphology

Parsing

Semantics is a field of knowledge that focuses on the meaning of words and how these words can be used to described ideas, concepts and objects using other words which relate to ideas, concepts and objects, making it ultimately circular in nature and making all meaning relative. This is important to note in the field of artificial intelligence because an artificially intelligent agent cannot necessarily be said to have an underlying understanding of the subjective “meanings” of words, only possessing the connections between words that we provide. The distinction between an artificially intelligent system and human being seems intuitive but there is not necessarily a distinction as we assume that human beings have some sort of intuitive and fundamental understanding of words and ideas that is not simply circular and relative to other words and ideas but we cannot know if this is true for certain; since we do not fully understand the nature of knowledge.

The idea of semantics, which is usually a domain reserved for adaptive beings, being applied to a machine seems counter-intuitive but the principles can be said to be largely the same. Semantics create links between words and computers can form information structures, which are organised sets of information, such as lists of information, or pairs of words which are connected: this forms a sort of interconnected web of information. This web can be exploited to form pattern recognition and spot trends and links between information. The problem with this is that it is very broad and evolving whilst language is used to communicate ideas in a very specific and particular manner, which introduces the need for a more sophisticated approach to a use of language in order to accurately articulate the precise meaning of the information one is trying to communicate.

Our application is about an assassin that is trying to assassinate a target while manoeuvring a world of obstacles. The assassin is an agent in the world, the target is an agent that can also move autonomously and there are guards in the world that move autonomously and will try to stop the assassin if they cross paths with it.

The main idea we had for implementing language processing in our application was to have the end user be able to communicate with the assassin and give it commands. It is important to note that instead of communicating with the general world there is a directed line of communication.

Our idea of how we could implement into this app

Perspective of language and how this changes the context and nature of semantics and communication, also how communication is about the transferring of ideas and information between two subjective observers

Limitations of the use of language in our program

Appropriateness of the use of natural language processing in our program

Future developments

Conclusion