

Homework 1

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Homework 1.2

The most challenging tasks in NLP are ones that require reasoning and a deep understanding of language. Due to the ambiguity of language, it is difficult for computers to accurately determine the meaning of words/sentences. As a result, tasks such as grammar checkers¹, machine translation², speech recognition³, or argument mining⁴ are very difficult. With regard to speech recognition, the very varied use of a language (speed, speech impediments, slang, dialects, etc.) further complicates this task.

NLP has also progressed in areas such as statistical decipherment of dead languages,⁵ which is a difficult task for humans as well as machines as it not only requires the understanding of human language but also very specific domain knowledge⁶.

¹[Microsoft](#), accessed: 11.11.2020

²[Microsoft](#), accessed: 11.11.2020

³[IBM](#), accessed: 11.11.2020

⁴[UKP: ArugmenText](#), accessed: 11.11.2020

⁵[MIT](#), accessed: 11.11.2020

⁶Luo, Jiaming/Cao, Yuan/Barzilay, Regina: Neural Decipherment via Minimum-Cost Flow: from Ugaritic to Linear B. URL: http://people.csail.mit.edu/j_luo/assets/publications/NeuroDecipher.pdf