A)   My understanding of Natural Language Processing is another branch of human and technology interaction. NLP allows for computers, mobile phones, TVs, and other simple technologies to translate human speech into machine code. While NLP is not a interface interactive, NLP is rooted from the umbrella of Artificial Intelligences.

B)   As stated, NLP is a large branch from the growing tree of Artificial Intelligence. NLP's connection with Artificial Intelligence is bridged with the information gathering needed for AI to improve its learning for us, humans. AI can use the information gather of human language to accurately generate words for the user when a search engine is being used or sending a email.

C)   In every dialog in all human language, natural language understanding, and natural language generation will occur. While both elements in human social dialog involve verbal and visual processing, the formation of the spoken words will affect the comprehension of the sentence and in turn will effect the generation process. For instance, most greeting phrases such as "Hi" and "Hello there" can be understood someone addressing known acquaintance or a approach to welcome someone; however, this same phrase can but interpreted as not knowing the greeter.

D)   Some of the modern NLP application in the 21th century can include voice recognition & detection, language translation, word suggestions in texting, and even shopping recommendations.

E)   There are three main approaches of NLP that have be used to deconstruct human language. The most obvious approach of learning any language is understanding the rules of it, thus the Rules-based Approach for NLP is one avenue that programmers can take. Some essential aspects in Rules-based Approaches are: the conversion for plural to singular word can shorten the word and language grammar.

If understanding and learning a language is not your preferred method, NLP also has a **Statistical and Probabilistic approach**. Dominating most of the 1990s up to 2010, **Statistical and Probabilistic approach** was successful in understanding the syntax of words when it comes to translation. For instance, the Spanish word for *Wisdom teeth* is *Muela;* however, before Statistical and Probabilistic approach rules-based approach might have translated *sabiduría diente*.

If the last two still do not intrigue you, then **Deep Learning Approach** is the final option for NLP programmers in 2022. While it is still new to the NLP game, deep learning continues to produce promising results each day. Some of the algorithms that deep learning uses are neural networks (either recurrent or convolutional), LSTMs and other basic neural network algorithms.

F)   Natural Language Process is very new to me and many of my classmates. While I am interested in translating different human languages, I am also curious in speech recognition aspect in NLP. This will be an experience that will improve my professional experience in artificial intelligence technology as NLP is essentially ingrained into majority of our electric devices. If possible, I hope to design and test NLP speech software as one of the projects, so that I can decide if I would want to produce activation software catered to my voice.