Cris Chou
Mazidi
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       NLP is the way a computer can interpret the human language. NLP is a subsection of the larger field, AI. *Natural language understanding* is the understanding of dialogue. *Natural language generation* is the creation of responses to dialogues. Modern examples of NLP applications include but are not limited to identifying spam emails, OK google, or Siri, and online language translation services.

       The first method of NLP is the rule-based approaches. Rule-based approaches seek to convert plural forms to singular forms, and process language through a list of rules and exceptions. A well known example would be Eliza the therapist chatbot.

       The next method is the statistical and probablistic approaches. This relies on statistical and probability analysis to help determine words, and sentence structures to create language models. This approach coincides with many of machine learning's algorithms as it is also heavily based on statistical and probabilistic models. Statistical and probabilistic models are used for certain translating services as well as search suggestions. They require large amounts of data to become more accurate.

       The last method is deep learning. Deep learning uses multiple neural networks in tandem to process and learn data. This process requires large amounts of data and quality hardware to utilize its full potential. Deep learning is used for many modernized NLP applications today such as Siri's voice, or language image translations for services like Google Translate and Papago.

       I personally am interested in NLP because I found ML fun and exciting, and wanted to see what another subsection of AI would be like. My current senior project is also related to NLP and will be creating a chatbot using OpenAI.I hope to learn the fundamentals of NLP in this class, and believe that it will be able to guide me along my senior project. It will also be interesting to see the similarities and differences within the different fields of AI.