

a. Define NLP in your own words

Natural language processing is when machines break down and interpret human languages.

b. Describe the relationship between AI and NLP

Natural language processing is a branch of artificial intelligence.

c. Write a sentence or two comparing and contrasting natural language understanding and natural language generation

Both natural language understanding and natural language generation are a subset of natural language understanding and a narrow concept. Natural language understanding is the understanding what the other person said. natural language generation the formation of spoken response

d. List some examples of modern NLP applications

1. chatbots
2. speech recognition
3. text summarization
4. virtual assistants

e. Write 3 paragraphs describing each of the 3 main approaches to NLP, and list examples of each approach

1. Rules-based approaches – This approach is to check the rules for the sentences. Within these sentences this approach will autogenerate the correct sentences. Or it will check the sentence to see if it is grammatically correct. An example of this approach is converting plural to singular.
2. Statistical and probabilistic approaches – This approach works by counting the words that is being used in the sentence. It counts the words as how many of a specific word there is within one sentence. This helps out with machine learning in that when reading a large data file you will have to be used for testing and training. An example of this approach is using specific words that is similar to another word from two different sentences like “first brother” and “older brother”
3. Deep Learning – This approach evolves from neural networks using algorithms to learn the rules that humans create. Once the rules are learned it is used in the program that the person creates so that way it doesn’t have to be taught to. An example of this approach AI machines.

f. Write a paragraph describing your personal interest in NLP and whether/how you would like to learn more about NLP for personal projects and/or professional application.

I’m interested in NLP because it is interesting that NLP breaks down and interpret human languages. I would like to learn more about NLP for projects and/or professional projects because it would be cool to be able to be make applications like a chat bot or virtual assistance.