HUMAN LANGUAGE VS COMPUTERS

- Code is quite different from human languages or natural languages
  - Diverse vocabularies
  - Different meanings
  - Different accents
  - Word play
NATURAL LANGUAGE PROCESSING

[SENTENCE] → [NOUN PHRASE] [VERB PHRASE]
[NOUN PHRASE] → [ARTICLE] [NOUN]
[NOUN PHRASE] → [ADJECTIVE] [NOUN]
[NOUN PHRASE] → [NOUN]
[VERB PHRASE] → [VERB]
[VERB PHRASE] → [VERB] [NOUN PHRASE]
[VERB PHRASE] → [VERB] [PREPOSITIONAL PHRASE]
[VERB PHRASE] → [VERB] [NOUN PHRASE] [PREPOSITIONAL PHRASE]
[VERB PHRASE] → [VERB] [NOUN PHRASE] [ADVERB]
[PREPOSITIONAL PHRASE] → [PREPOSITION] [NOUN PHRASE]

Knowledge Graph
CHATS BOTS

- **NLP uses two processes called parsing and generating text. Which are the fundamental components of natural language chat bots?**

- **Early Chat Bots**
  - **ELIZA**
  - The original program was described by Joseph Weizenbaum in 1966. This implementation by Norbert Landsteiner 2005.

- **ELIZA:** Is something troubling you?
  - **YOU:** Men are all alike.
  - **ELIZA:** What is the connection, do you suppose?
  - **YOU:** They’re always bugging us about something or other.
  - **ELIZA:** Can you think of a specific example?
  - **YOU:** Well, my boyfriend made me come here.
  - **ELIZA:** Is it important to you that your boyfriend made you come here?
  - **YOU:** He says I’m depressed much of the time.
  - **ELIZA:** I am sorry to hear that you are depressed.
  - **YOU:** It’s true. I am unhappy.
  - **ELIZA:** Can you explain what made you unhappy?
  - **YOU:**

- **CHAT BOTS TODAY**

  - **Interesting video**
  - **Facebook Labs Experiment**
    - It wasn’t evil it was efficient
SPEECH RECOGNITION

• Bell Labs – 1952 – Created Audrey
• 1962 – IBM – a shoe box size machine
• 1971 - DARPA – Harpy
• Signal in – Processing [ Algorithms(FFT) – Signal out (text)
• An intelligent assistant
• uses advanced machine learning Tech to function
• Siri input – Apple’s Data Center – Algorithms – Creates a voice response
• Signal out sent back

THANK YOU

• Bibliography
• CARRIE ANNE PHILBIN
• [Link](http://ocdevel.com/podcasts/machine-learning)
• [Link](https://www.searchtechnologies.com/natural-language-processing-services?gclid=CjwKCAiAxJPVBRB4EiwAsCA4aX8blyUdKhrdhsoGGKQydoIPaINU0bTXqg/dimEL2lb01wKSLTs0CbicQAvD_BwE)
• [Link](https://en.wikipedia.org/wiki/Natural_language_processing#Speech)
• [Link](https://en.wikipedia.org/wiki/Siri)