Things that humans can do better than AI:

* Common Sense
* Adaptability
* Solving unaddressed problems
* Chain of Thought (CoT) - “the steps you take for the AI to solve a problem of the steps AI takes to solve the problem”
* “Attention Is All You Need”
* Deductive Thinking - “get a large group to explain a small group or getting a small group to explain a large group”

Natural Interactions:

* Speech recognition
* Gestures
* Affective Computing, Ex. When the Tesla vehicle sees you on your phone it will tell you to pay attention
* Using facial expressions

Wattson – first AI to beat a group of people in a game of Jeopardy

Moravec’s paradox - “AI can do narrow but complex tasks”

In 1950 the Turing test was invented for someone to tell the difference from an AI and a Human

In 1951 marked the beginning of Game AI

In 1956 john McCarthy first coined “AI”

In 1960 GM (General Motors) invented the first robot

In 1961 Eliza was created (NLP and ML)

In 1997 IBM deep blue beats chess champion

In 2005

In 2011 IBM Wattson beats Jeopardy champions

# **10/18/2024-**

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**NATURAL LANGUAGE PROCESSING (NLP)**

Natural Language Processing or NLP is a field of artificial intelligence and computational linguistics that focuses on the interaction between computers and human language. The goal of NLP is to enable computers to understand, interpret, and generate human language in a useful way.

This includes detecting sentiment, machine translation, or spell check - often repetitive but cognitive tasks. Through NLP, computers can accurately apply linguistic definitions to speech or text. But every language has a certain level of ambiguity. Take the following sentences as an example:

**“My husband is French”**

**“Excuse my French”**

Both sentences use the word French - but the meaning of these two examples differ significantly.

Key aspects of NLP include:

* Understanding human speech and text
* Translating between languages
* Generating human-readable text and speech
* Extracting meaning and information from text

11/01/2024-

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**Vocab**

* Computer vision - Capabilities within AI to interpret the world visually through cameras, video, and images.
* Document intelligence - Capabilities within AI that deal with managing, processing, and using high volumes of data found in forms and documents.
* Knowledge mining - Capabilities within AI to extract information from large volumes of often unstructured data to create a searchable knowledge store.
* Generative AI - Capabilities within AI that create original content in a variety of formats including natural language, image, code, and more.\

**NOTES**

Constituency Parsing = Chomsky Phrase Structure

01/09/2025-

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**ASURE AI FUNDAMENTALS**

Corpus – the main body or mass of a structure

**Steps of Machine Learning**

* Get the data
* Clean the data
* Fold (separate between evaluation data)
* Train the data
* Evaluate the data

**Vocab**

MAE – Mean Absolute Error

MSE – Mean Squared Error

RMSE – Root Mean Squared Error

Binary classification -

Embedding – to create a multi-dimensional vector based on data such as a video or picture

or how your computer sees the world

SAR

S – Situation - What did I do (INVOLVE NUMBERS)

A - Your Action – How did you get it done (INVOLVE STEPS)

R- Results – what did you do to get out of the situation