

BERT model

Kiyan Rezaee – 22 July 2022

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User intent

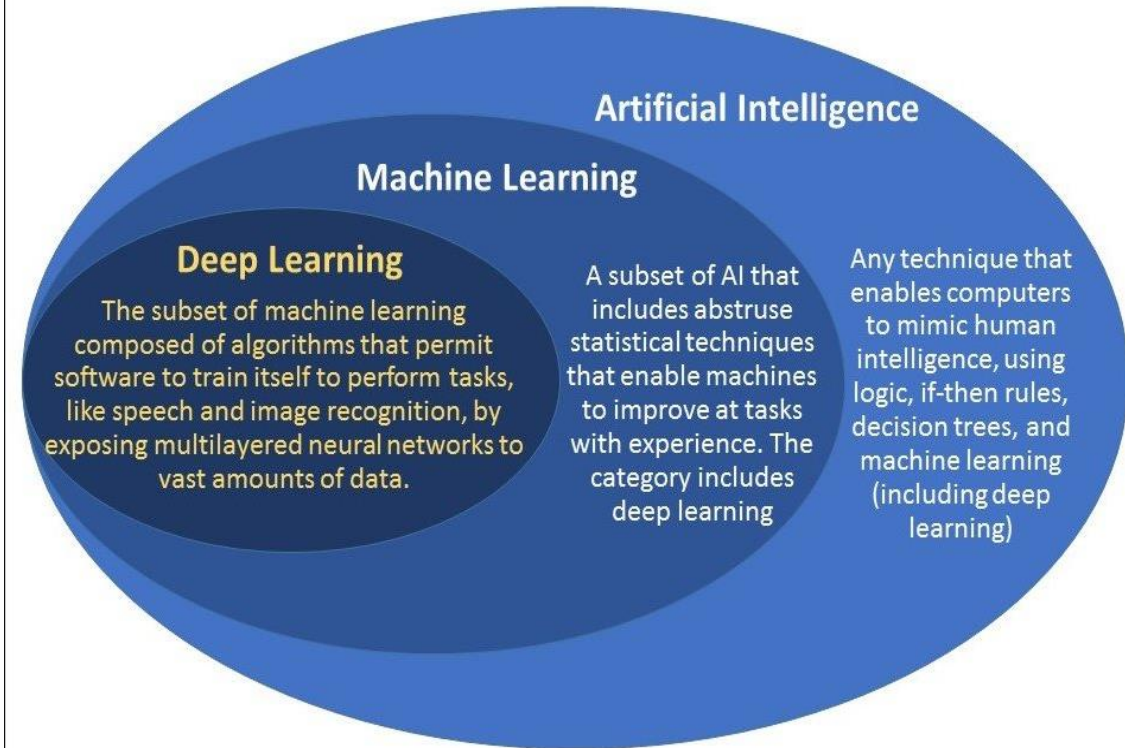
User intent, otherwise known as **query intent** or **search intent**, is the identification and categorization of what a user online intended or wanted to find when they typed their search terms into an online web search engine for the purpose of search engine optimisation or conversion rate optimisation.^[1] Examples of user intent are fact-checking, comparison shopping or navigating to other websites.

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[HTTPS://EN.WIKIPEDIA.ORG/WIKI/USER_INTENT](https://en.wikipedia.org/wiki/User_intent)

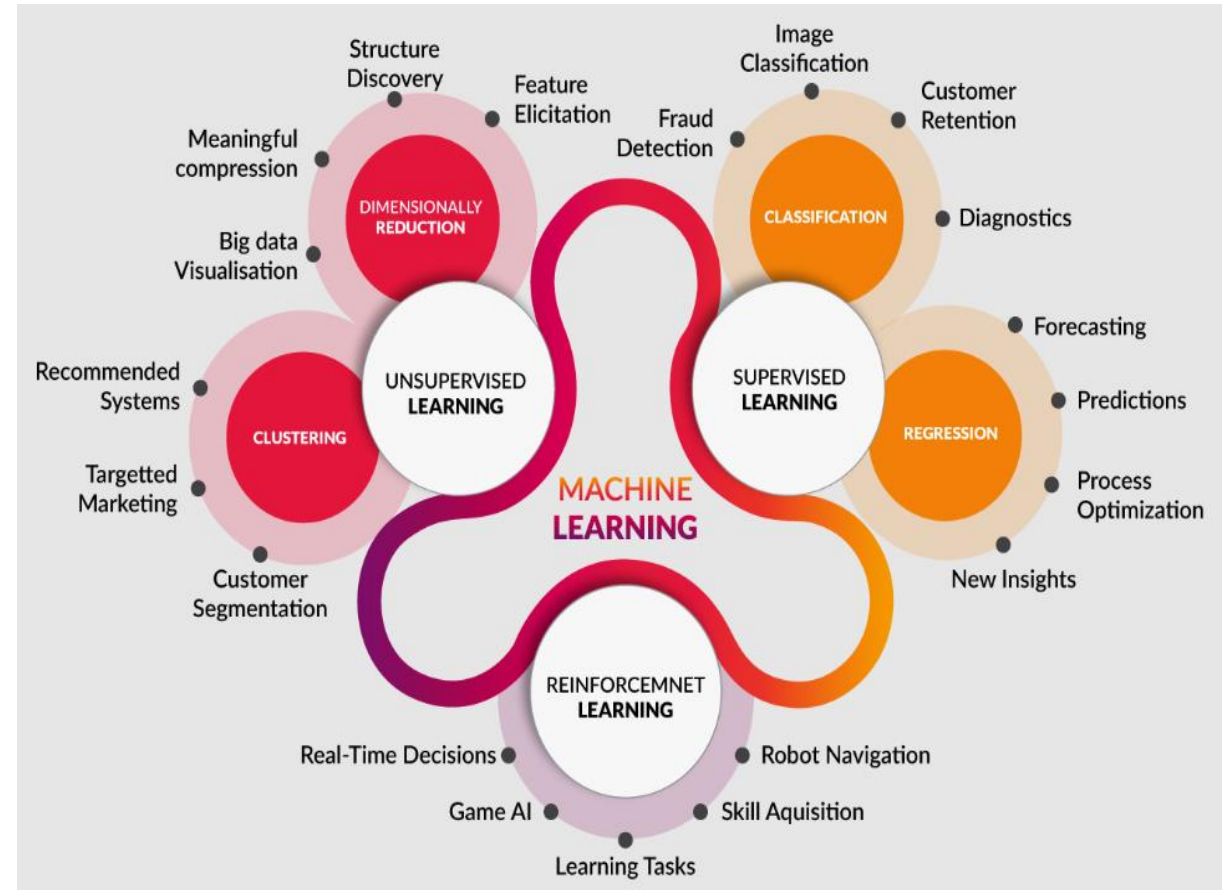
intelligence

AI
Machine learning
Deep learning



Machine Learning

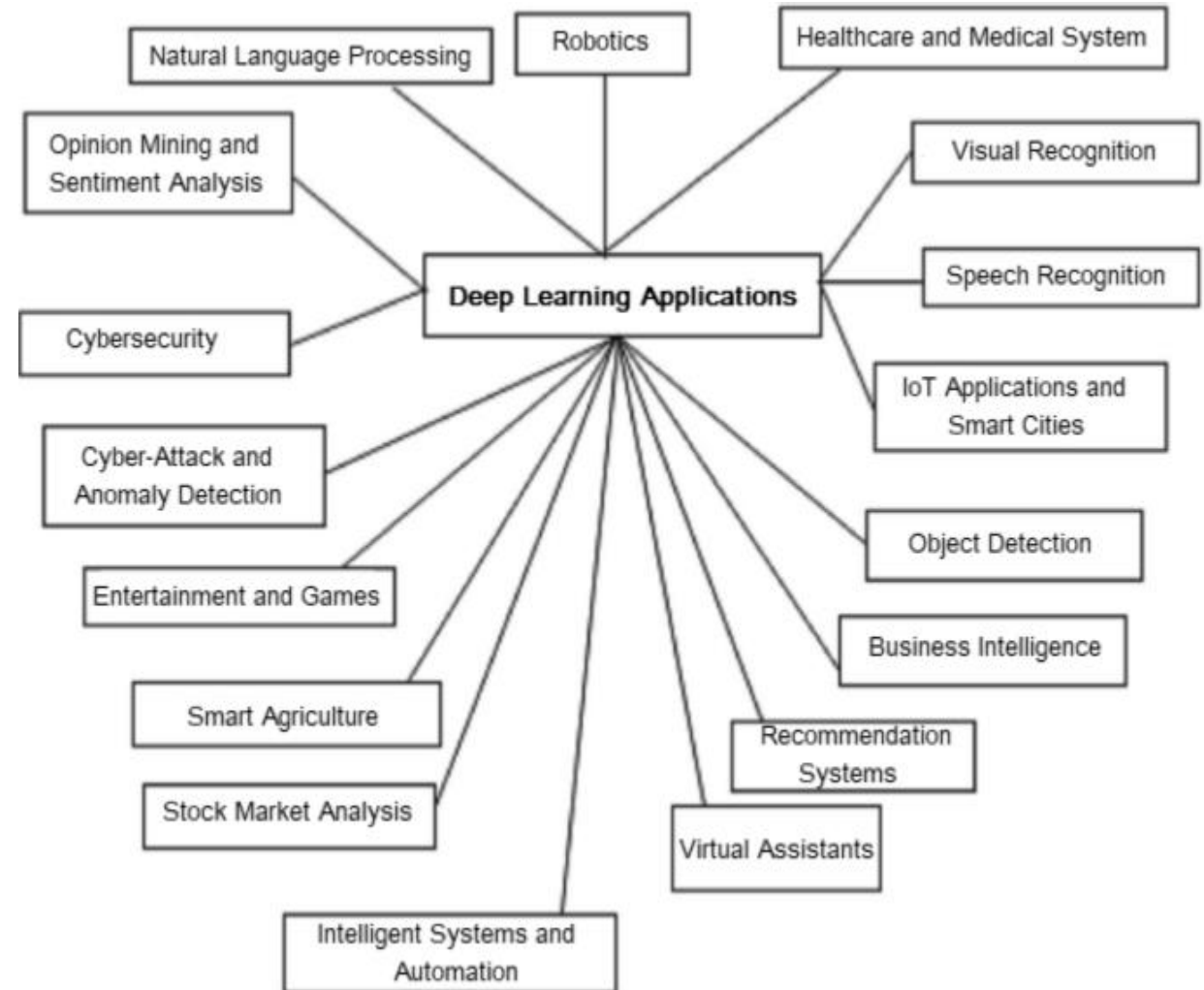
supervised and unsupervised learning



Model



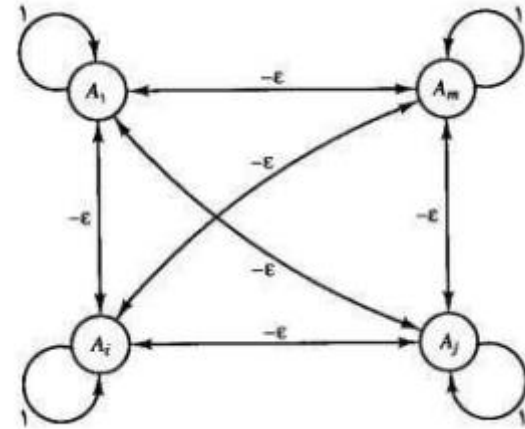
Deep learning



RNN

Recurrent neural network

7



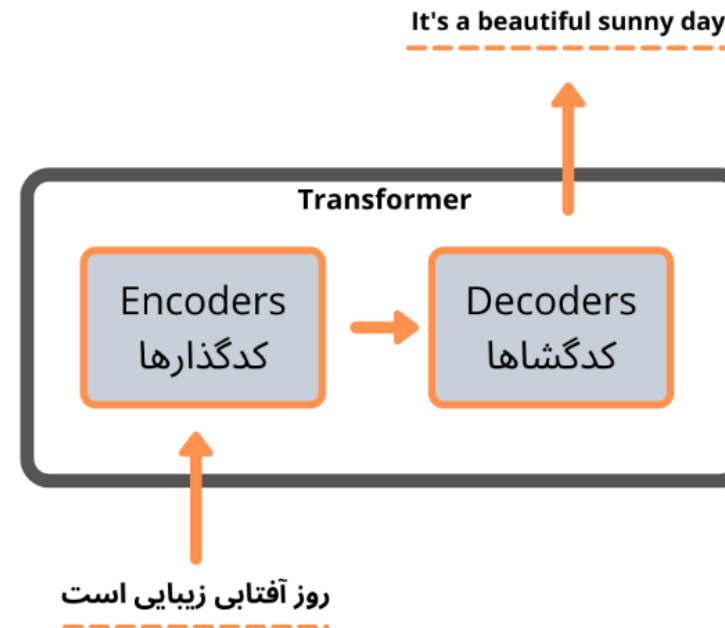
Transformers

Encoder-decoder architecture

Attention

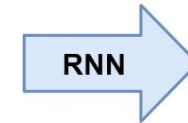
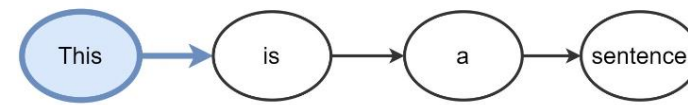
Self-Attention

EX : Perceiver, GPT-3, BERT



<https://arxiv.org/abs/1706.03762>

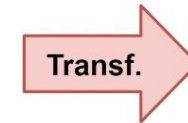
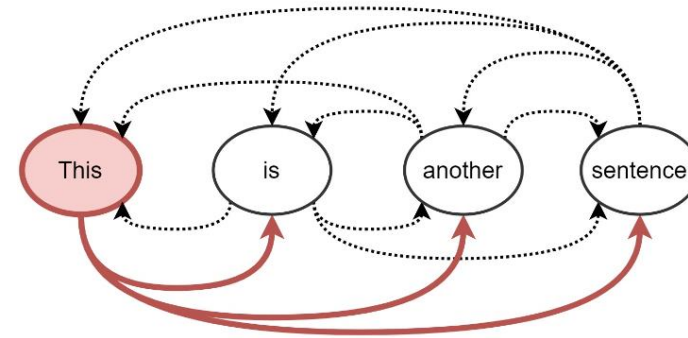
RNN vs Transformers



Translation?

Sentiment?

Next word?



Part-of-speech tags?

Bert model

- Bidirectional Encoder Representations from Transformers (BERT)
- Small dataset
- Semi-supervised
- Example...

Bidirectional Language Modeling

→ Left-to-Right →

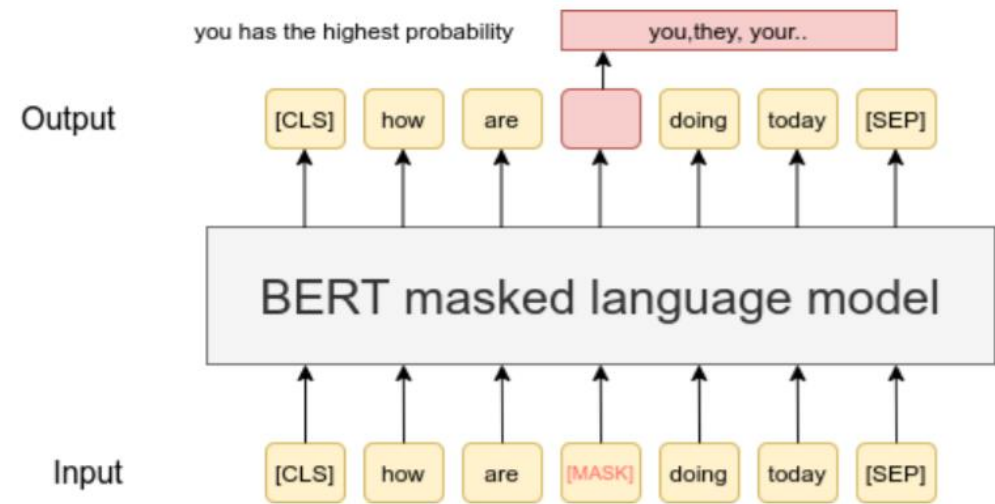
"All of the BERT results presented so far have used the fine-tuning [MASK]"

← Right-to-Left ←

"[MASK] of the BERT results presented so far have used the fine-tuning approach"

↔ Bidirectional ↔

"All of the [MASK] results presented so [MASK] have used the fine-tuning approach"



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Future works

PREPROCESSING DATA(TEXT)

TRANSFORMERS IN DETAILS

OTHER MODELS LIKE GPT-3

BERT MODEL

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