

Week 1 Quiz 2

1. What do you call the commonly used AI technology for learning input (A) to output (B) mappings?
 - Generative AI
 - Reinforcement learning
 - Unsupervised learning
 - Supervised learning
2. Which of the following are examples of tasks that could be performed by supervised learning models?
 - Writing a reply to an email
 - Determining whether a medical image indicates disease or not
 - Deciding if a user will click on an online advertisement
 - Deciding if a product review is positive or negative
3. In the example about retinal image classification, Laurence mentioned that a supervised learning model learned to predict additional relationships between data points beyond the disease state, like the sex of the patient. What does this suggest about supervised learning?
 - The model can only predict the original target labels of the data it was trained on.
 - The model can identify broader patterns and relationships in the training data.
 - The model has become sentient and can think for itself.
 - The model is overfitting the training data by finding unnecessary patterns.

The ability of the model to uncover additional relationships, such as the sex, demonstrates that supervised learning models can generalize beyond the target labels and learn meaningful, broader patterns from the training data itself
4. Which of these is the most accurate description of an LLM?
 - It generates text by using supervised learning to carry out web search
 - It generates text by finding a writing partner to work with you
 - It generates text by repeatedly predicting words in random order
 - It generates text by repeatedly predicting the next word or token.

A Large Language Model (LLM) has been trained to repeatedly predict the next word using 100 billions - trillions of examples of text from the internet.
5. How does the attention mechanism of a transformer work?
 - It adjusts the vector embeddings of tokens to account for the surrounding words

The attention mechanism adjusts the vector embeddings of tokens by considering their surrounding context, allowing the model to capture relationships between words.

- It allows the model to focus on specific words when predicting the next word

The attention mechanism in transformers helps the model focus on specific words or tokens when predicting the next word, giving more weight to relevant parts of the input.

- It searches existing sources of text to determine the most probable next word
- It maps input to output tokens using unsupervised learning