

VV 54 – Artificial Intelligence

In this lesson we'll look at vocabulary related to **artificial intelligence**, or **AI**. AI includes **machine learning**, which may rely on **neural nets** for **deep learning** and use complex **algorithms**. AI also includes **autonomous** applications and machines such as **bots**, which use **natural language processing** for interaction.

Vocabulary

Artificial intelligence (AI)

Artificial intelligence, or AI, is the development of computer systems that can learn and solve problems. AI is used for speech recognition, decision-making, translation, and data analysis.

- Hospitals are using artificial intelligence to help them manage patients' treatment.

Machine learning

Machine learning is a type of AI in which a computer or system can improve based on its own experience. Machine learning often involves using large amounts of data to develop models or make predictions.

- SoundCloud uses machine learning to recommend music based on your listening history.

Neural net

A neural net is a system of hardware and software modelled on the human brain. Many interconnected processors and programs work together to process input and solve problems.

- We are teaching our neural net to produce automatic email responses for customer support.

Deep learning

Deep learning is a type of machine learning that uses complex neural nets. Deep learning involves learning from many examples rather than a simple set of instructions.

- Deep learning can be used to help software identify specific people in photographs.

Algorithm

An algorithm is a set of rules or instructions that tells a computer what actions to perform. Artificial intelligence relies on very complex algorithms to enable computers to analyze data.

- Shipping companies use complex algorithms that are able to find the fastest and cheapest route between two points.

Autonomous

Software or machines that can observe and respond to their environment are called autonomous. Autonomous technologies are designed to operate without human direction.

- Car companies are experimenting with autonomous cars that drive themselves.

Bot

A bot is a software application that can interact with users autonomously. Some bots analyze information and prompt users to take action while others can simulate human-like conversation.

- Many airlines now use bots that help users to book tickets, check in for flights, and get flight updates.

Natural language processing (NLP)

Natural language processing, or NLP, is the ability of computers to understand and produce natural human language. NLP may involve computer and human interactions through written or spoken language.

- Apple's Siri relies on natural language processing to answer questions from users.

Now it's your turn to practice some of the words we've looked at in this lesson. In a moment, you'll hear a series of sentences with a word replaced with a beep. Repeat each sentence, *including* the missing word.

For example, if you hear:

Example Cue: Google is a leader in the field of artificial <beep>.

You can say:

Example Answer: Google is a leader in the field of artificial **intelligence**.

We'll provide the correct answer after each question.

Ready? Let's give it a go.

Cue 1: In the near future, we may see <beep> cars on our roads.

Answer: _____

Cue 2: Computers have mastered difficult games using deep <beep>.

Answer: _____

Cue 3: Software that can recognize voices relies on natural language <beep>.

Answer: _____

Answer 1: In the near future, we may see **autonomous** cars on our roads.

Answer 2: Computers have mastered difficult games using deep **learning**.

Answer 3: Software that can recognize voices relies on natural language **processing**.

That's all for this episode of Video Vocab. Be sure to check out our website at www.VideoVocab.TV for more videos on Business English vocabulary.

Thanks for watching and see you again soon!

Language Review

A. Match the words on the left with the words on the right to form correct collocations.

1. Neural	a. Learning
2. Machine	b. Car
3. Natural Language	c. Intelligence
4. Autonomous	d. Net
5. Artificial	e. Processing

B. Fill in the gaps with words from the box below.

deep	bot	algorithm
net	AI	autonomous

1. With its purchase of the company DeepMind in 2014, Google is now a global leader in research on _____.
2. Our company has managed to save over two millions dollars a year since we started using _____ to help customers with simple technical problems.
3. Recommendation systems such as those used to suggest music depend on _____ learning.
4. There may be one or several hidden layers within an artificial neural _____.
5. Every search engine depends on a complex _____ that determines the order or ranking of search results.
6. Do you really think that twenty years from now we'll all be riding in _____ cars to and from work?

C. Read the question and choose the best answer from the options shown.

1. Which of the following refers to a system of hardware or software?
 - a) Neural net
 - b) Algorithm
 - c) Machine learning

2. Which of the following concepts includes the other two?
 - a) Machine learning
 - b) Deep learning
 - c) Artificial intelligence

3. Which of the following might an average computer user interact with?
 - a) Bot
 - b) Neural net
 - c) Algorithm

4. Which of the following involves adapting based on experience?
 - a) Algorithm
 - b) Machine learning
 - c) Autonomous

5. Which of the following would rely on the other two to function?
 - a) Natural language processing
 - b) Bot
 - c) Algorithm

Answers

A

1. d; 2. a; 3. e; 4. b; 5. c

1. Neural Net
2. Machine Learning
3. Natural Language Processing
4. Autonomous Car
5. Artificial Intelligence

B

1. With its purchase of the company DeepMind in 2014, Google is now a global leader in research on **AI**.
2. Our company has managed to save over two millions dollars a year since we started using **bots** to help customers with simple technical problems.
3. Recommendation systems such as those used to suggest music depend on **deep** learning.
4. There may be one or several hidden layers within an artificial neural **net**.
5. Every search engine depends on a complex **algorithm** that determines the order or ranking of search results.
6. Do you really think that twenty years from now we'll all be riding in **autonomous** cars to and from work?

C

1. a; 2. c; 3. a; 4. b; 5. b