

Unit 11

Student's book

Artificial Intelligence الذكاء الاصطناعي

Key words

Artificial	صناعي	actuated	تشغيل	emerged	ظهر	neutrality	الحيادية
specialized	متخصص	aviation	الطيران	applications	تطبيقات	hurdles	العقبات
imitating	تقلد	assistance	مساعدة	infrastructure	البنية التحتية	personalization	التخصيص
agents	ادوات	spark	الشرارة	limitations	قيود	Rational	العقلانية
conduct	تنفذ- تؤدي	associated	ربط	detect	اكتشاف	harmonic	التوافقية

الآلات ذكية صناعة في متخصصة الهندسة و العلوم من فرع الذكاء الصناعي

Artificial Intelligence (AI) is the branch of science and engineering specialized in making clever machines,

ذكاء مستوى البشر تقليد و التفكير على قدرة capable of thinking and imitating human-level intelligence.

المحيط مع تتفاعل التي ادوات ذكية كليا انتاج ل مجال الأهداف الرئيسية من واحد

One of the primary targets of AI field is to produce fully intelligent agents that interact with the surroundings

تميز و الأمور لتحكم القدرة تمتلك , أدوات الوكلاء هؤلاء تصرفات مثل البشر تؤدي و

and conduct human-like behaviors. These agents are tools, having the ability to judge matter and differentiate

حولهم العالم مع التفاعل و استشعار يمكن التي , الروبوتات مع بدأ المجال خطأ هو ما

what is wrong. The field has started with robots, which can sense and react to the world around them.

الوسائط المتعددة و اللغة الطبيعية ب تشغيلها يمكن التي , وكلاء برمجيات بحتة تشمل أيضا هي

They also cover purely software-based agents, which can be actuated with natural language and multimedia.

التعرف الصور والإعلان عبر الإنترنت والطب والطيران القيادة ل يتوسع المجال حاليًا

Currently, the field expands to driving, aviation, medicine, online advertising, image recognition

والرياضيات هندسة المعلومات علوم الحاسوب على يعتمد مجال الذكاء الاصطناعي المساعدة الشخصية

, and personal **assistance**. The **AI** field is **based on** computer science, information engineering ,mathematics,
1950. عام بدأت الشرارة الأولى المجالات الأخرى العديد من و الفلسفة و اللغويات علم النفس
psychology, linguistics, philosophy and many other fields. The first **spark** started in the year 1950,
لسلوك الإنسان مكافئ سلوك ذكي لإظهار الآلة على قدرة تم اختبار عندم
when a test of the ability of a machine to exhibit intelligent behaviour equivalent to that of a human was done.
الذي الذكاء الاصطناعي مجال مع وربطه بشكل وثيقا تم تقديمه مصطلح
الذكاء الاصطناعي منذ ذلك الحين
Since then, the term AI has been introduced and closely **associated** with the field of artificial intelligence which
عندما ظهر لـ "الوكيل الذكي" المفهوم الجديد "التسعينيات في الثمانينيات نهاية حتى شائعا كان
was popular until the end of the 1980s. In the 1990s, the new **concept** of "intelligent agent" **emerged** when **AI**
والتعليم الأمن الصحة مثل مجالات أخرى ليشمل تم تطويره بل علوم الكمبيوتر على يقتصر فحسب لم
was not only **limited to** computer science, but developed to include other areas **like** health, security, education,
لكل البنية التحتية في يتم تضمينها بعمق تطبيقات العديد من تطبيقات الأعمال و الفن والموسيقى
music, art, and business **applications**. Many **AI** applications are deeply embedded in the **infrastructure** of every
تقنيات ومع ذلك الصناعات جميع تقريبا تمس أن سنوات قليلة في ومن المتوقع صناعة
industry, and they are expected, in a few years, to touch nearly all the industries.
However, **AI** technologies are
على لقدرة "الحس السليم" إلى الافتقار هو قيود أحد تطبيقات خاصة جدا محددة لاتزال
still limited to very specific applications. One of the **AI limitations** is the lack of "common sense"- the power to
الذكاء العاطفي من حيث محدود أيضا المعرفة المكتسبة يتجاوز المعلومات على الحكم
judge information beyond its acquired knowledge. **AI** is also limited in terms of **emotional intelligence**.
والخوف والألم و التوتر والحزن والفرح والغضب مثل الحالات العاطفية البشرية الأساسية اكتشاف فقط يمكن علاوة على ذلك
Moreover, **AI** can only **detect** basic human emotional states such as **anger, joy, sadness, stress, pain, fear**, and
العقلانية التخصيص مستويات أعلى من العقبات التالية أحد هو الذكاء العاطفي الحياد
neutrality. Emotional intelligence is one of the next **hurdles** to higher levels of **personalization**. **Rational** and
الحفاظ على الأفكار البحثية و المشاريع الخاصة بالتطبيقات بين مطلوبة التوافقة

harmonic interactions are required between **application-specific projects** and research ideas to sustain the

أن تعيق لا ينبغي مخاوف هكذا مجتمعنا على التكنولوجيا تأثير بشأن مخاوف
progress of **AI**. There are also fears about the impact of technology on our society.
Such fears should not **hinder**

يزدهر سوف في المستقبل حيث إطار عمل منهجي تطوير ولكن تقدم
the progress of **AI**, but motivate the development of a systematic framework on
which future **AI** will **flourish**,

الآلات بأن الاعتقاد السائد على الرغم من الواقع العملي عن الخيال العلمي فصل
so it is quite important to apart **science fiction** from **practical reality**. Despite the
common belief that machines

بمستقبلنا القريب أدوات التحكم الجديدة بأنها يعتقدون الكثير منتجات من صنع الإنسان هي
are **man-made products**, many think of them as the new controllers of our near
future!

Choose the correct answer

1-Artificial agents -----

- a-can't imitate human beings b- can interact with the surroundings
c-can imitate humans d- both b and c

2-The field of (AI) started with -----

- A-mini devices b- robots c- giant mobiles d- all mentioned

3- There are also about the impact of technology on our society.

- a-worries b- predictions c- concerns d- both a and c

4-The future of artificial intelligence is expected to touch -----

- a-a limited number of industries b- some industries c- a few industries
d- all the industries

5-One of the next obstacles to higher levels of personalization is -----

- a-emotional intelligence b- industrial revolution c- education d-
all mentioned

B-Match the words with their meanings.

The definitions

1- A very small burning piece of material. قطعة صغيرة جدًا من المواد المحترقة

2- **Equal** in value, amount, meaning, importance, etc.

متساوية في القيمة والمبلغ والمعنى والأهمية وما إلى ذلك

3- The state of not supporting either side in a disagreement competition or war.

حالة عدم دعم أي من الطرفين في خلاف أو منافسة أو حرب

4- The designing, building and flying of aircraft. تصميم وبناء وتحليق الطائرات

5- To make it difficult for somebody to do something.

لتجعل من الصعب على شخص ما القيام بشيء ما

6- People or things that do an action. الأشخاص أو الأشياء التي تقوم بعمل ما

Read the text again, then decide whether the following sentences are True or False. Correct the false ones.

- 1- Clever machines, capable of imitating humans, are examples of **natural** intelligence. F (artificial)
- 2- Clever machines have the ability to judge matter and distinguish what is wrong. T
- 3- Artificial intelligence emerged after doing many experiments on machines to imitate humans' behaviour. T
- 4- Nowadays, AI applications are **used in all industries**. F (AI technologies are still limited)
- 5- To sustain the progress of AI, there should be a consistent interchange between research theory and practice. T

Choose the correct answer.

- 1- A very small burning piece of material.

a-Spark b-Equivalent c-Neutrality d-Aviation

- 2- Equal in value, amount, meaning, importance, etc.

a-Spark **b-Equivalent** c-Neutrality d-Aviation

- 3-The state of not supporting either side in a disagreement competition or war.

a-Spark b-Equivalent **c-Neutrality** d-Aviation

- 4- The designing, building and flying of aircraft.

a-Spark b-Equivalent c-Neutrality **d-Aviation**

- 5- To make it difficult for somebody to do something.

a-Neutrality b-Aviation **c-Hinder** d-Agents

- 6- People or things that do an action.

a-Neutrality b-Aviation c-Hinder **d-Agents**

Unit 11
Workbook
Robot

Key words

stems	مشتق	tirelessly	بلا تعب	operational	التشغيلية	accuracy	الدقة
slave	عبد	complicated	معقد	creative	الإبداعية	repeatability	التكرار
advantage	الفائدة	extensive	واسع	benefits	فوائد	privilege	امتياز
accompanied	تترافق	storage	تخزين	mines	المناجم	adaptability	التكيف
endlessly	بلا نهاية	fulfill	ينجز	production	الإنتاج	manufacturers	المصنعون

يشبه روبوتاً صنع الإنسان العبد تعني التي التشيكية من مشتقة كلمة "روبوت"

The word "robot" **stems** from the Czech "robotnik" which means a "**slave**". Man has built a robot after his/her

الإيجابية و السلبية كلا المشاعر القوية من متنوعة لديهم أن في البشر السبب هو هذا ربما صورته

doing productive activities that people cannot easily **perform**. At present, the main challenge of robotisation is in combining human and robot activities, trying to find the best human-robot match. Meanwhile, robots have the ability to do **heavy-duty** jobs with **accuracy** and **repeatability**, human beings have the **privilege** of creativity, flexibility, decision-making and **adaptability**. When experts reach high degree of **co-operation**, **manufacturers** would enhance efficiency and capacity, as well as improve quality and industrial working conditions.

تتمتع الروبوتا وفي الوقت نفسه تطابق الروبوت والإنسان أفضل لعثور محاولة الأنشطة الروبوتية و البشرية ضم في الإبداع بامتياز ويتمتع البشر تكرر و بدقة المهام الشاقة عمل على بالقدرة

المصنعون من التعاون إلى درجة عالية يصل الخبراء عندما على التكيف و القدرة واتخاذ القرار والمرونة , flexibility, decision-making and **adaptability**. When experts reach high degree of **co-operation**, **manufacturers** وظروف العمل الصناعية و الجودة إلى تحسين بالإضافة القدرة و الكفاءة سيعزز

would enhance efficiency and capacity, as well as improve quality and industrial working conditions.

المشكلة هذه مذهلة تكون أن يمكن المدراء و العمال بين للروبوتات التأثيرات التحفيزية

Motivational influences of robotics among workers and managers can be amazing. This issue has been recognised in the medical sector in some empirical operations despite the fact that the use of robotics in risky tasks need **special attention** from safety and health experts. As the modern world is eager to witness

في الروبوتات استخدام أن حقيقة على الرغم من العمليات التجريبية بعض ف القطاع الطبي تم التعرف

مشاهدة على متشوق العالم الحديث بمان خبراء الصحة و السلامة من اهتمام خاص يحتاج المهام الخطرة

الأثار الجانبية السلبية من للتخلص حاجة ملحة فهناك ذكي و فكري مبتكر هو ما كل

all that is innovative, intellectual and smart, there is an urgent need to **eliminate** the negative **side-effects**

فترة التحول التكنولوجي المستمرة في التحدي الرئيسي هو و هذا لتطبيقات الروبوت الجديدة

of new robot applications and that is the key challenge in ongoing technological transition period.

Choose the right answer :

- 1-People consider robots ----- because man has built robot after his image.
a-both friends and enemies b- neither friends nor enemies c- either friends or enemies d- friends only
2. The crucial thing for designers to pay close attention to, is the robot's ability to -----
A- get married b- speak c- follow patterns d- teach
- 3- The generalized robot is ----- other robots in the way it can to some extent imitate humans.

a-Similar to b- the same as c- not different from **d-**
different from

4-Intelligent machines will ----- people to focus on the creative process when depending on them.

a-help b- discourage c- not allow d-
depress

5. Humans are superior to robots in -----

A- creativity b- flexibility c- decision- making d- all
mentioned

Read the text, then decide whether the following statements are True or False.

- 1.The Czech word "robotnik" is the origin of " robot"(t)
- 2.The use of robotics will be expanded in the future because of the robots' specialization. (t)
- 3.Working in mines and deep waters are the things that humans are forced to do in the future intelligent.(f)
- 4.Robots will make production process quicker and at a low cost. (t)
- 5.Accuracy and repeatability are the main features of man-made production. (f)
- 6.The key challenge in ongoing technological transition period is finding a man-machine match. (t)

Match the following words with their definitions.

The definitions

1-A person owned by another person and is forced to work for them.

شخص مملوك لشخص آخر ويجبر على العمل لديهم

2- To do or achieve what was hoped or expected. لفعل أو تحقيق ما كان مأمولاً أو متوقعاً

3-An area of knowledge or activity that someone is responsible for.

مجال المعرفة أو النشاط المسؤول عنه

4- The ability to understand or do something. القدرة على فهم شيء ما أو القيام به

5-A special right or advantage that a particular person has.

حق أو ميزة خاصة يتمتع بها شخص معين

Choose the correct word.

1-A person owned by another person and is forced to work for them.

a-Fulfill **b-Slave** c-Domain d-Capacity

2- To do or achieve what was hoped or expected.

a-Fulfill b-Slave c-Domain d-Capacity

3-An area of knowledge or activity that someone is responsible for.

a-Fulfill b-Slave **c-Domain** d-Capacity

4- The ability to understand or do something.

a-Fulfill b-Slave c-Domain **d-Capacity**

5-A special right or advantage that a particular person has.

a-Fulfill b-Slave **c-Privilege** d-Capacity

Pronunciation

Strong and Weak Forms of Auxiliary verbs.

Auxiliary Verb الفعل المساعد	Weak ضعيف	Strong قوي	Weak عندما تأتي في بداية الجملة في صيغة السؤال	Strong في الإجابة القصيرة
am	/əm/	/æm/	Am I late?	Yes, I am .
are	/ə/	/ɑ:/	Are they going?	Yes, they are .
is	/s/ /z/	/iz/	This cat's fast? Who's coming?	Yes, it is . Ali is .
was	/wəz/	/wɒz/	Was the weather terrible?	Yes, it was .
has	/həz/ /həs/	/hæz/	Has the rose died? The milk's gone sour, hasn't it?	Yes, it has .
have	/həv/	/hæv/	Have you ever been there?	Yes, I have .
do	/də/	/du:/	Do they come early?	Yes, they do .
does	/dəz/	/dʌz/	Does the train leave at five?	Yes, it does .

Decide whether these statements have weak or strong forms of the auxiliaries

Auxiliary Verb	Weak	Strong
He's my best teacher.	w	
Do they play any sport?	w	
She was late.	w	
Yes, we have .		s
Have you ever seen it?	w	
Yes, there are .		s
Does she speak French?	w	
She has decorated the room, hasn't she? - Yes, she has .	w	s
I'm tired.	w	
The girls are beautiful, aren't they?" - "Yes, they are ."		s
Where is John?" - "John's here."	w	
Does he earn a good living? " - "Yes, he does ."	w	s
This watch is mine.	w	
Can I help you?" - "Sure, you can ."	w	s
The men've eaten.	w	
Has he paid the bill? " - "Yes, he has ."	w	s

Grammar

Reported Speech

الكلام المنقول (غير مباشر) هو الكلام الذي ننقله من شخص الى شخص آخر. و نقوم بالتغيرات التالية:
أفعال النقل (said – told – reported – asked – wanted to know)

I like English .

He said he liked English.

الضمير (مباشر)	التغير المتكلم مذكر (منقول)	التغير المتكلم أنثى (منقول)
I	He	She
My	His	Her
Me	Him	Her
We	They	They
Our		Their
Us		Them

Is/am	Was
Are	Were
Was+ were	Had been
V1 فعل تصريف اول	V2 فعل تصريف ثاني
V2 فعل تصريف ثاني	Had +V3
Has/have +V3	Had + V3
Will	Would + V1
Can	Could + V1
Have to	Had to + V1
Yesterday	The day before / the previous day.
Last night	The night before / the previous night.
Tomorrow	The following day
Here	There
Don't + V1	Didn't + v1

1. We're taking the nine o'clock train. Judy told me.....the nine o'clock train.

a-they are taking b-they were taking c-they take d-they took

2. I'll have to get up early. She said.....to get up early.

a-she will have b-she would have c-she had d-she has

3. I don't really like traveling by train. She told me.....travelling by train.

a-she didn't like b-she hadn't liked c-she doesn't like d-she liked

4. It's an easy way to travel. She said an easy way to travel.

a-it is b-it was c-it had been d-it will be

5. I want to see the waterwheels there. She told me to see the waterwheels there.

a-she wants b-she wanted c-she had wanted d-she has wanted

6. We've been to Hama before. She told me theyto Hama before.

a- had been b- went c- have been d- would be

7. We **didn't see** everything. She said they.....everything

a- didn't see b- haven't seen c- hadn't seen d- saw

8. I **will be** here at noon. Ali said **there** at noon.

a- he will be b- he was c- he is d- he would be

9. The train **arrives** on time. Maria said the trainon time.

a- arrives b- is arriving c- had arrived d- arrived

10. I **have to** finish **this** report by three o'clock. Tareq said..... finish **that** report by three o'clock.

a- he had to b- he has to c- he should have to d- he would have to

11. The boy **will improve** quickly. The doctor said the boy quickly.

a- improves b- had improved c- would improve d- improved

12. I **am** leaving later today. William said later that day.

a- he is leaving b- he was leaving c- he had left d- he left

13. I **saw** that movie **last night**. Joly said.....that movie **the previous night**.

a- she sees b- she saw c- she has seen d- she had seen

14. I **have read** that book. Helen said..... that book

a- she has read b- she was reading c- she had read d- she reads

15. I **cannot go** to the movie with you. She said the movie with him.

a- she hasn't gone b- she couldn't go c- she hadn't gone d- she can go

16. I **arrived** **yesterday**. Hani said.....**the day before**.

a- he would arrive b- he arrived c- he had arrived d- he arrives

17. I **'m going to** stay for 3 weeks. He saidfor 3 weeks.

a- he was going to stay b- he was staying c- he has been staying d- he stayed

Reported Questions

Direct question	Reported question
Do you like English?	He wanted to know if I liked English.
Did he finish his work?	He asked me whether he had finished his work.
Where do you live?	He asked me where I lived.
What is he doing?	He asked me what he was doing.

1. Where **do** you live?" She asked him.....

a- where he lived? b- where did he live? c- where he lived. d- where he had lived.

2. "**Do** you live in Damascus?" He asked Mary.....in Damascus.

a- if she lives. b- if did she live? c- if she lived. d- if she has lived.

3- "How long **does** it take you to get home?" My mother wanted to know how long.....me to get home.

- a-did it take **b-it took** c-it had taken d-it takes
4. "Who do you want to meet, sir?" Sami asked Mr. Hamad..... to meet.
a-who she wanted. **b-who he wanted** c-who he wants d-who he had wanted
5. "What time did the film start?" My friend wanted to know what time.....
a-had the film started. b-the film started. c-the film starts. **d-the film had started.**
6. "What kind of films do you like watching?" Mary asked Natalie What kind of films.....
a-she liked. b-she liked? c- did she like? d-she likes.
7. "Why do you want the job?" She asked him why.....the job.
a-does he want b-he wants c- did he want **d-he wanted**
8. "How did you hear about it?" She asked him: How.....about it.
a-he had heard b-had he heard c- did he hear d-he hears
9. "Do you have a car or do you prefer walking?" She asked him: if.....or he had preferred walking.
a-he had a car b-had he a car c- he has had a car d-he has a car
10. "How much do you expect to earn?" She asked him: How much.....to earn.
a-he had expected b-had he expected **c- he expected** d-he has expected
- 11- Where do you live? I asked him where.....
a-he lived b- he had lived c- had he lived d-did he live ?
12. "Are you going to the cinema at the weekend?" He asked me: if.....to the cinema at the weekend.
a-was I going **b-I was going** c- I am going d-I had been going
- 13.How long are you going to stay? She asked them: How long.....to stay.
a-they were going b- were they going c- they have been going d-they had been going
14. "Where is the key?" He asked me.....
a-where was the key. b-where was the key? **c- where the key was.** d-where the key was?
- 15."What is the time?" He asked me.....
a-what the time was. b-what was the time? c- what the time was? d-what the time is.
- 16-What is your name? I asked him.....
a-what his name was? **b-what his name was** c- what was his name? d-what was his name.
17. "Have you ever been to London?" He wanted to know: if I to London.
a- had ever been b-has ever been c- have ever been d- had ever being

18. "Have you got any experience before?" She asked him if..... any experience before.

a-had he got b-he had got c- he has got d-he got

19. "Have you worked before?" She asked him: if he.....before.

a- had worked b-had worked? c- worked d- works

20. "Can you work seven days a week?" She asked him: If he.....seven days a week.

a- could work? b- worked c- could work d- had worked

21. "How will you travel to work?" She asked him: How heto work.

a- would travel b- would have travelled c- would traveled d-will travel

22. "When can you start?" She asked him: when.....

a- could he start? b-he could start. c- he could start? d-he could starts.

Everyday English

Being Tactful ان تكون لبق

اسلوب اللباقة

We sometimes soften a message by using particular words or phrases like:

Past Forms صيغ الماضي	We were planning to go to the cinema tomorrow.
Modals الأفعال المساعدة	It could have been a bit hotter. I'd go for black instead if I were you. would
Not sounding negative ان لا تكن سلبيًا	I think darker colours suit you better. I've seen better performances.
Adverbs of attitude ظروف الموقف	Honestly , I've heard better singers. Unfortunately , the food was salty.
Example Sue : Does this dress look OK? Anny : Well, I think darker colours suit you better. I'd go for black instead if I were you	

1-Your partner has taken you to the cinema as a birthday present.

You didn't like the film , but your partner did. (express your dislike)

a-it was an amazing film B- I didn't like the film c- I have seen better performances
d- it was a bad film

2-What did you think of their new kitchen?

a-I have seen better designs. b- It is the worst design.
c- It was sort of interesting. d- I didn't like it.

3- Do you think the music is too loud?

a-It is too loud turn it down. b- I would turn it down if I were you.
c- It is too loud. d- it is bad music.

4- What did you think of the article I sent you?

A- I read better articles. b- it was not a good article.
c- It was wonderful. d- Frankly, it could have been a bit more detailed.

5- Do my legs look fat in these?

A- Yes, they are too fat. b- I think a looser pair would suit you better.
c- Yes, choose another one. d- Yes, they look horrible.

6- Your sister has moved into a new flat, which you think is horrible. (Give your opinion)

a-It is a horrible flat b- I don't like this flat c- Honestly, I have seen better flats
d- Congratulations!

7. You are invited to attend a feast at your uncle's house, but you are too busy.(Apologise tactfully)

a-Honestly, I 'would like to come but I am busy b- I don't like such occasions.
c-It is a wonderful idea. d-I will think about it.

Writing

Write a composition of no more than 120 words about different uses of artificial intelligence in our modern life.

Artificial Intelligence refers to the intelligence of machines. This is in contrast to the natural intelligence of humans and animals. With artificial intelligence, machines perform functions such as learning, planning and problem-solving. Most noteworthy, artificial intelligence is the imitation of human intelligence by machines. It is probably the fastest-growing development in the world of **technology and innovation**. Furthermore, many **experts** believe **AI** could solve major challenges and crisis situations. Experts believe **AI** would certainly become a **part and parcel** of human life soon. **AI** would **completely** change the way we **view** our world. With artificial intelligence, the future seems **intriguing** and **exciting**. To sum it up, artificial intelligence looks all set to be the future of the world.

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منصة طريقي التعليمية

طريقي
مع أنس أحمد

