

By: Reem.M.A
@Mrsreem



حل الواجب المنزلي :



مراجعة سريعة
لما سبق تعلمه بالدرس السابق

سؤال:



By: Reem.M.A
@Mrsreem



كيف تعمل الآلة؟

سؤال:



By: Reem.M.A
@Mrsreem



ما هو التّعلم العميق؟

ARTIFICIAL INTELLIGENCE

A program that can sense, reason,
act, and adapt

MACHINE LEARNING

Algorithms whose performance improve
as they are exposed to more data over time

DEEP LEARNING

Subset of machine learning in
which multilayered neural
networks learn from
vast amounts of data



الوحدة :
التاريخ :
المادة : تقنية رقمية 2



الوحدة الثانية : الذكاء الصناعي

الدرس الثاني : تطبيقات الذكاء الصناعي

By: Reem.M.A
@Mrsreem



معلومات الدرس



الأهداف:

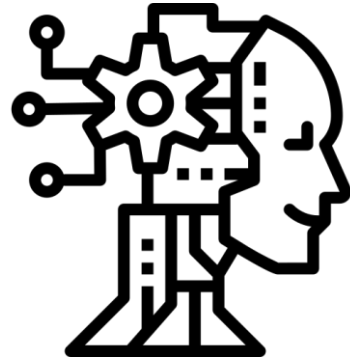


By: Reem.M.A
@Mrsreem

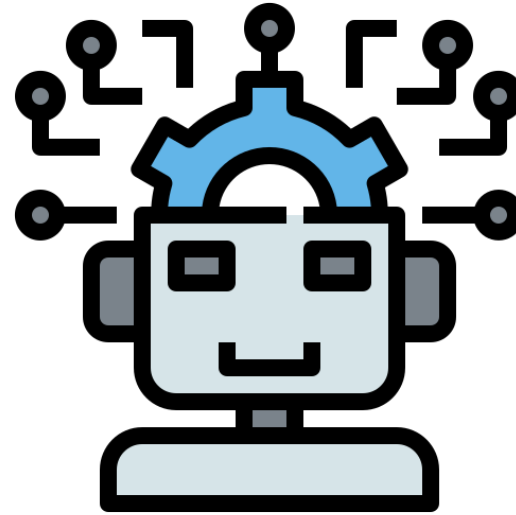


في نهاية درسينا الجميل سنكون قادرين بإذن الله على:

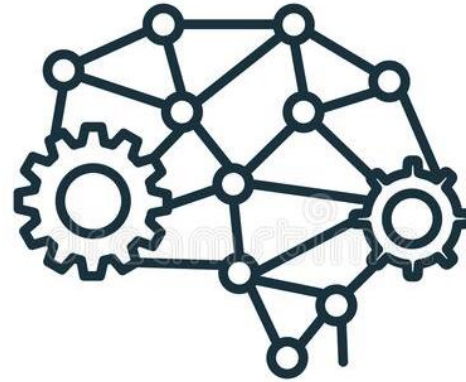
- تحديد التطبيقات المختلفة لتعلم الآلة.
- كيفية إنشاء نموذج تعلم الآلة.



ماذا نعني بتعلم الآلة؟



تعلم الآلة :



DEEP LEARNING

ML → DL



تعلم الآلة :

التعلم العميق يحتاج



تعلم الآلة :

تُعد البيانات وقود النماذج في التعلم العميق
كلما كانت البيانات أكثر كلما كانت النتائج أفضل



تعلم الآلة :

يتعامل مع البيانات شديدة التعقيد بالنسبة



DEEP LEARNING

مخرجات محددة بوضوح في شكل يمكن للبشر قراءته



كيف يتم تحقيق ذلك؟



1- البيانات

2- الخوارزمية

3- الدالة



كيف يتم تحقيق ذلك؟



١- البيانات

هي بيانات الإدخال، وعادة ما تأتي مع وصف (بيانات منظمة).





CIC

[About the CIC >](#)[Membership >](#)[Research >](#)[Datasets ▾](#)[Webinars >](#)[Global EPIC Program >](#)[Cybersecurity Workshop >](#)

DDoS Evaluation Dataset (CIC- DDoS2019)

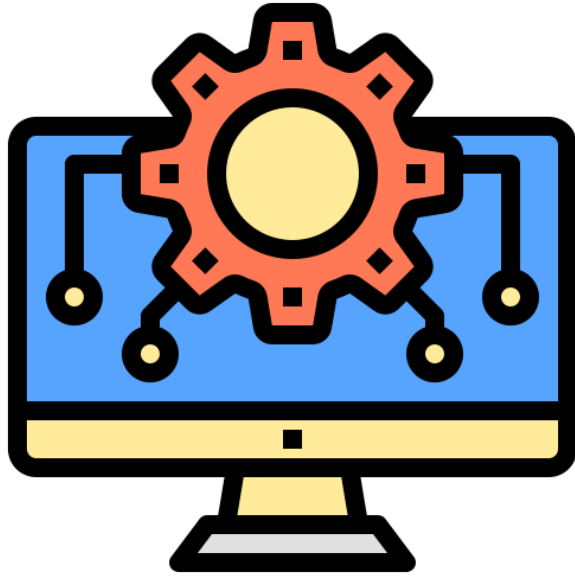
Distributed Denial of Service (DDoS) attack is a menace to network security that aims at exhausting the target networks with malicious traffic. Although many statistical methods have been designed for DDoS attack detection, designing a real-time detector with low computational overhead is still one of the main concerns. On the other hand, the evaluation of new detection algorithms and techniques heavily relies on the existence of well-designed datasets.

In this paper, we first review the existing datasets comprehensively and propose a new taxonomy for DDoS attacks. Secondly, we generate a new dataset, namely CICDDoS2019, which remedies all current shortcomings. Thirdly, using the generated dataset, we propose a new detection and family classification approach based on a set of network flow features. Finally, we provide the most important

هذه مجموعة بيانات عالمية خاصة بهجمات حجب الخدمة الموزعة ولها وصف بالموقع



كيف يتم تحقيق ذلك؟



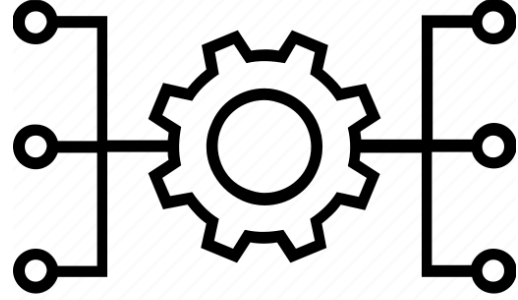
2- الخوارزمية

هي عبارة عن مجموعة من التعليمات التي تمت برمجتها بالحاسب لاتباعها من أجل معالجة مجموعة البيانات.



كيف يتم تحقيق ذلك؟

INPUT



OUTPUT

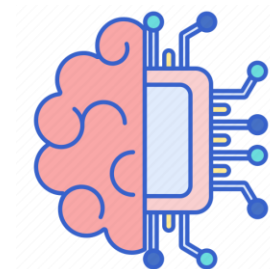
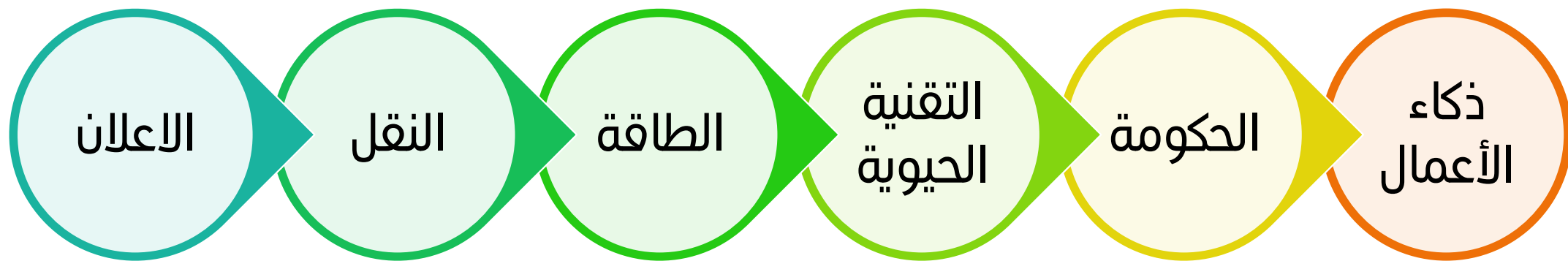


3- الدالة

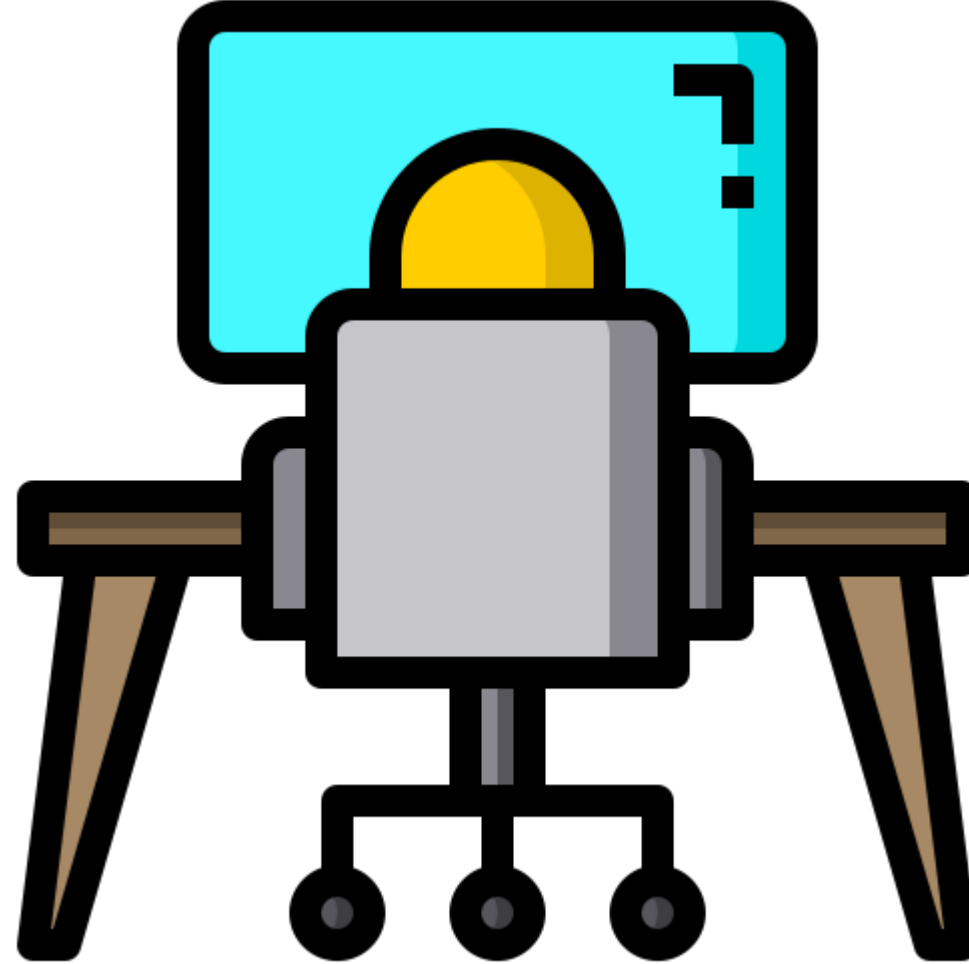
هي التعيين المستخرج لقيم الإدخال من مجموعة البيانات إلى مجموعة محددة بوضوح من قيم الإخراج أو النتائج.



أمثلة لتطبيقات الآلة في مجالات مختلفة



تطبيق عملي ممتع





البحث الآمن مفعل



ML FOR KIDS



الأدوات

المزيد :

الأخبار

التسوق

صور

فيديو

الكل

حوالي ٥٢٢,٠٠٠,٠٠٠ نتيجة (٠,٥٨ ثانية)

ترجم هذه الصفحة <https://machinelearningforkids.co.uk>

Machine Learning for Kids

An educational tool for teaching **kids** about machine learning, by letting them train a computer to recognise text, pictures, numbers, or sounds, and then ...

Worksheets

An educational tool for teaching kids about machine learning, by ...

Log In

An educational tool for teaching kids about machine learning, ...

Pre-trained models

An educational tool for teaching kids about machine learning, ...

Help

An educational tool for teaching kids about machine learning, ...

مزيد من النتائج من machinelearningforkids.co.uk

أسئلة طرحها الآخرون



How do I teach my child ML?



Can kids learn machine learning?



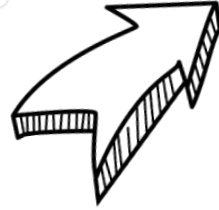
How kids can learn AI?

مشاهدة نتائج حول

< ...roduction to Artificial Intelligence



كتاب من قبل ديل لين



By: Reem.M.A
@Mrsreem





Teach a computer to play a game

Get started

Learn more

- 1 Collect examples of things you want to be able to recognise
- 2 Use the examples to train a computer to be able to recognise them
- 3 Make a game in Scratch that uses the computer's ability to recognise them



مراحل أي مشروع في تعلم الآلة



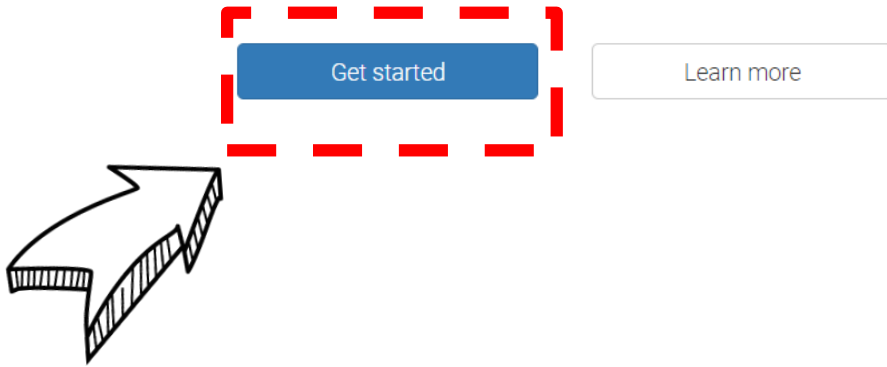
مراحل مشروعنا الحالي





Teach a computer to play a game

- 1 Collect examples of things you want to be able to recognise
- 2 Use the examples to train a computer to be able to recognise them
- 3 Make a game in Scratch that uses the computer's ability to recognise them



By: Reem.M.A
@Mrsreem





Get started with machine learning

First time here?

Sign up

[Why register?](#)

Already registered?

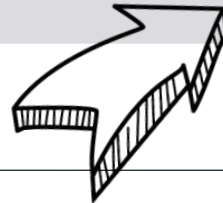
Log in

[Forgot your details?](#)

Try without registering

Try it now

للمتابعة بدون تسجيل



Login provided by:



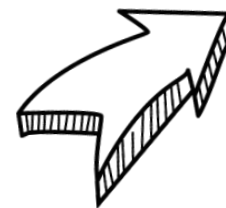


Your machine learning projects

Click the 'plus' button on the right to create your first project. →

+ Add a new project

Copy template





Start a new machine learning project

Project Name *

project1

إضافة اسم المشروع

Give your project a name to describe what sort of thing you'll try to teach the computer to recognise.

Recognising *

CREATE

CANCEL



Start a new machine learning project

Project Name *

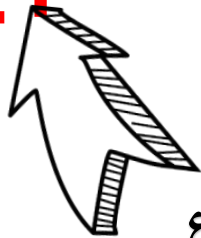
project1|

Give your project a name to describe what sort of thing you'll try to teach the computer to recognise.

Recognising *

CREATE

CANCEL



إضافة اسم المشروع





Start a new machine learning project

Project Name *

project1

text

images

numbers

sounds

What type of thing do you want to teach the computer to recognise?

For words, sentences or paragraphs, choose "text"

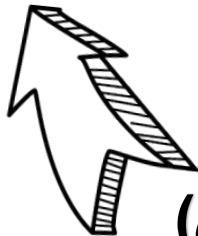
For photos, diagrams and pictures, choose "images"

For sets of numbers or multiple choices, choose "numbers"

For voices and sounds, choose "sounds"

CREATE

CANCEL



يمكن تعليم الحاسب بالـ (النصوص، الصور، الأرقام، الأصوات)





Start a new machine learning project

Project Name *

project1

Recognising *

images

What type of thing do you want to teach the computer to recognise?

For words, sentences or paragraphs, choose "text"

For photos, diagrams and pictures, choose "images"

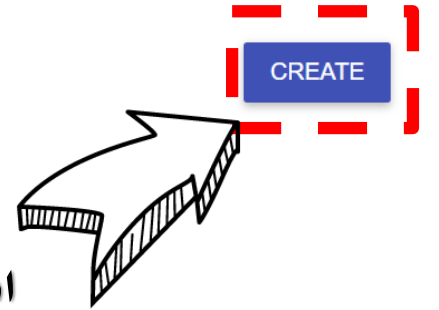
For sets of numbers or multiple choices, choose "numbers"

For voices and sounds, choose "sounds"

CREATE

CANCEL

انقر على إنشاء





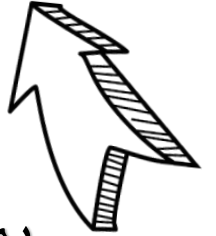
Your machine learning projects

+ Add a new project

Copy template

project1

Recognising **images**



يمكن حذف المشروع من هنا



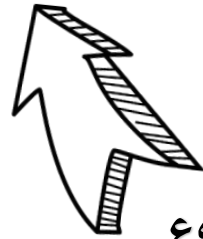


Your machine learning projects

+ Add a new project

Copy template

project1
Recognising **images**



انقر على المشروع





"project1"

Train

Collect examples of what you want the computer to recognise

Train

Learn & Test

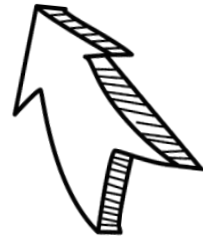
Use the examples to train the computer to recognise images

Learn & Test

Make

Use the machine learning model you've trained to make a game or app, in Scratch, Python, or App Inventor

Make



انقر على تدريب





Recognising **images**

[< Back to project](#)

Click on the 'plus' button on the right to add your first bucket. →

+ Add new label



By: Reem.M.A
@Mrsreem





Recognising images

[< Back to project](#)

Click on the 'plus' button on the right to add your first bucket. →

+ Add new label

Add new label

Enter new label to recognise *

cats

4 / 30

ADD

CANCEL

By: Reem.M.A
@Mrsreem





Recognising **images** as **cats**

[< Back to project](#)

[+ Add new label](#)

cats

Add new label

Enter new label to recognise *

dogs

4 / 30

ADD

CANCEL

By: Reem.M.A
@Mrsreem



[www](#)

[webcam](#)

[draw](#)



Photos for Machine Learning

Ships



يمكنكم التقييد بتصنيفات الكتاب ولكن نريد التغيير



البحث الآمن مغلّ | المجموعات

cats.jpg



أدوات : المزيد : خرائط : الأخبار : فيديو : صور : الكل



jpg photos free download
all-free-download.com



ملف:Tabby cat with blue ...
ar.m.wikipedia.org



File:Cat March 2010-1.jpg - Wikimedia Com...
commons.wikimedia.org



File:A-Cat.jpg - Wikipedia
en.wikipedia.org



File:Adorable-animal-cat-20787.jpg - ...
commons.wikimedia.org



ملف:Young cats.jpg - ويكيبيديا
ar.m.wikipedia.org



ملف:June odd-eyed-cat.jpg - ويكيبيديا
ar.wikipedia.org

By: Reem.M.A
@Mrsreem



Cats | Julie Austin Photography
jaustinphotography.com



10,000+ Best Cat Photos · 100% Fre...
pexels.com



Cat jpg photos free download
all-free-download.com



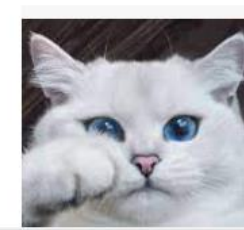
10,000+ Best Cat Photos · 100% Free Downloa...
pexels.com



40,000+ Cat Pictures & Images [HD] - Pixabay
pixabay.com



Cat jpg photos free download
all-free-download.com



سنبحث عن الصور التي نريدها ولكن بامتداد jpg أو png وتكون من أي متصفح بعد ذلك بالسحب والافلات سنضعها في برنامج الآلة

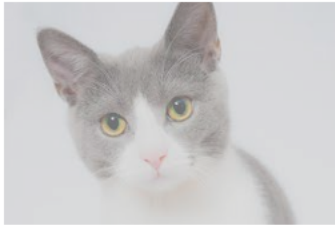


Recognising **images** as **cats or dogs**

[< Back to project](#)

+ Add new label

cats



www webcam draw

dogs

Drag pictures from other browser windows and drop them here

www webcam draw

نضعها الآن في خانة القطط نختار أكثر من صورة وكذلك الحال بالنسبة لصور الكلاب

By: Reem.M.A
@Mrsreem



By: Reem.M.A
@Mrsreem



cats

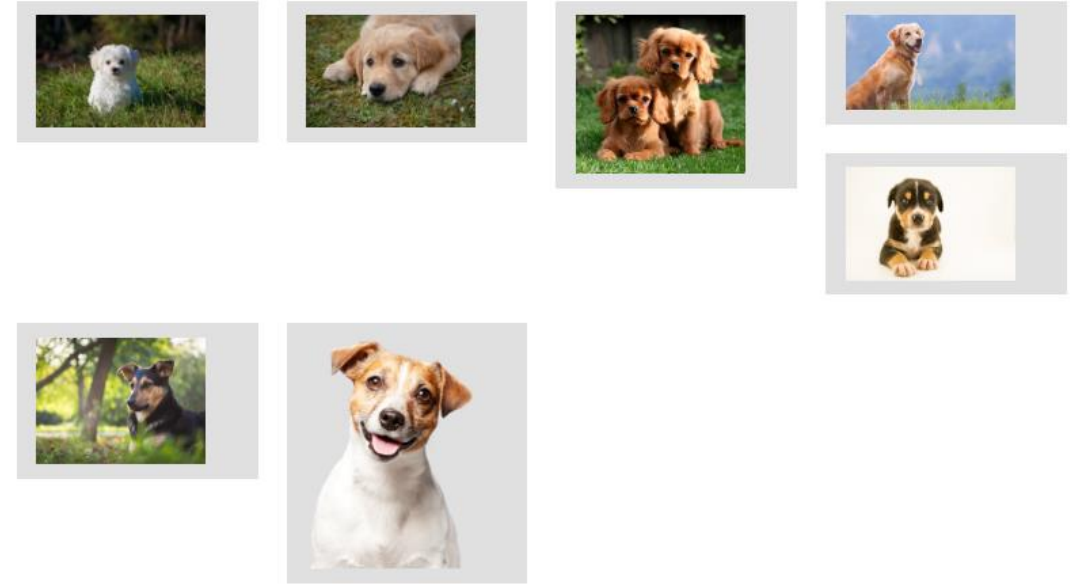


[www](#) [webcam](#) [draw](#)

7

+ Add new label

dogs



[www](#) [webcam](#) [draw](#)

7

"project1"

Train

Collect examples of what you want the computer to recognise

Train

Learn & Test

Use the examples to train the computer to recognise images

Learn & Test

Make

Use the machine learning model you've trained to make a game or app, in Scratch, Python, or App Inventor

Make



الصور تُحفظ تلقائياً نذهب الآن إلى تعليم واختبار النموذج





Machine learning models

[< Back to project](#)



By: Reem.M.A
@Mrsreem



What have you done?

You have collected examples of images for a computer to use to recognise when images are cats or dogs.

You've collected:

- 7 examples of cats,
- 7 examples of dogs

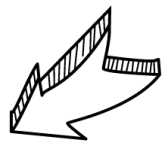
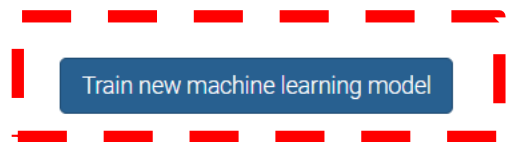
What's next?

Ready to start the computer's training?

Click the button below to start training a machine learning model using the examples you have collected so far

(Or go back to the [Train](#) page if you want to collect some more examples first.)

Info from training computer:



الآن أقوم باختبار النموذج باستخدام عينات جديدة



What have you done?

You have trained a machine learning model to recognise when images are cats or dogs.

You created the model on Tuesday, September 27, 2022 7:53 PM.

You have collected:

- 7 examples of cats,
- 7 examples of dogs

What's next?

Try testing the machine learning model below. Enter an example image below, that you didn't include in the examples you used to train it. It will tell you what it recognises it as, and how confident it is in that.


If the computer seems to have learned to recognise things correctly, then you can go to Scratch and use what the computer has learned to make a game!

If the computer is getting too many things wrong, you might want to go back to the [Train](#) page and collect some more examples

Once you've done that, click on the button below to train a new machine learning model and see what difference the extra examples will make!

Try putting in an image to see how it is recognised based on your training.

 Test with **webcam**

 Test by **drawing**

Test with a web address for an image on the Internet

Test with **www**



What have you done?

You have trained a machine learning model to recognise when images are cats or dogs.

You created the model on Tuesday, September 27, 2022 7:53 PM.

You have collected:

- 7 examples of cats,
- 7 examples of dogs

What's next?

Try testing the machine learning model below. Enter an example image below, that you didn't include in the examples you used to train it. It will tell you what it recognises it as, and how confident it is in that.


If the computer seems to have learned to recognise things correctly, then you can go to Scratch and use what the computer has learned to make a game!

If the computer is getting too many things wrong, you might want to go back to the [Train](#) page and collect some more examples

Once you've done that, click on the button below to train a new machine learning model and see what difference the extra examples will make!

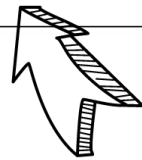
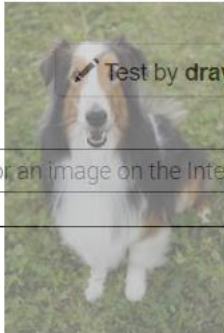
Try putting in an image to see how it is recognised based on your training.

 Test with **webcam**

 Test by **drawing**

Test with a web address for an image on the Internet

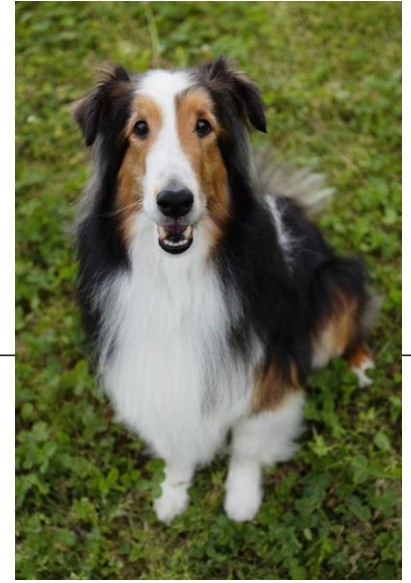
Test with **www**



بنفس طريقة السحب والافلات السابقة نضعها هنا



اخترت هذه الصورة



Try putting in an image to see how it is recognised based on your training.

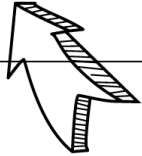
Test with webcam

Test by drawing

<https://hips.hearstapps.com/ghk.h-cdn.co/assets/17/30/shetland-sheep-dog.jpg>

Test with www

Recognised as **dogs**
with 100% confidence




رائع جداً , لاحظوا أنه تعرف على صورة الكلب الجديد وطابقه بنسبة 100%




اخترت هذه الصورة



Try putting in an image to see how it is recognised based on your training.

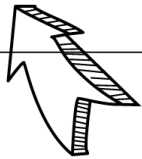
 Test with **webcam**

 Test by **drawing**

<https://www.rd.com/wp-content/uploads/2021/04/GettyImages-988013222-scaled-e1618857975729.jpg>

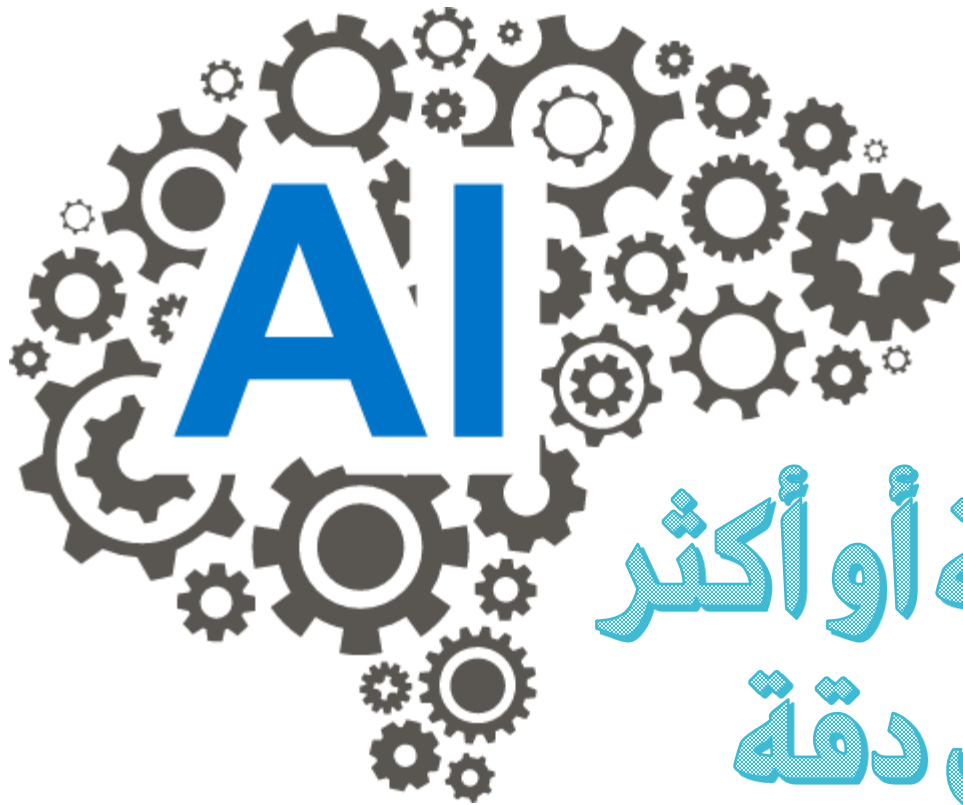
Test with **www**

Recognised as **cats**
with 98% confidence



نتيجة ممتازة , لاحظوا أنه تعرف على صورة القطعة الجديدة وطابقها بنسبة 98%

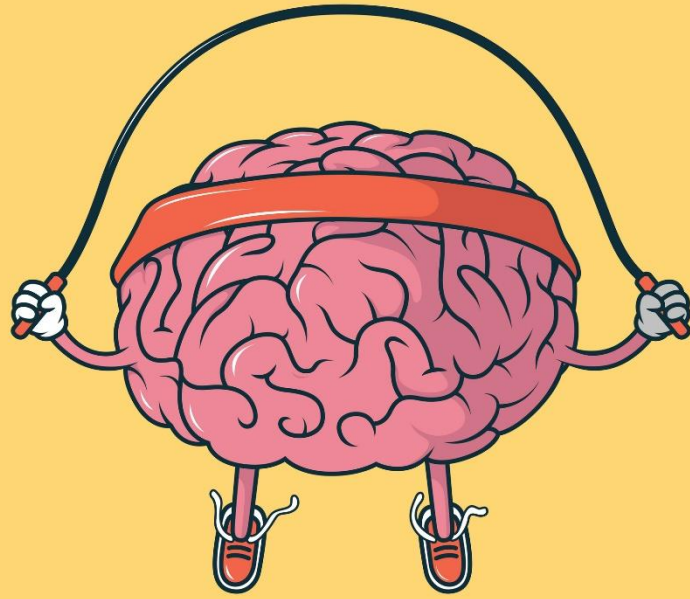




صف طريقة أو أكثر لتحسين دقة نموذج تعلم الآلة



التقويم الختامي



صف ثلاثة تطبيقات مختلفة حيث يمكن استخدام تعلم الآلة



ماذا تعلمنا اليوم ؟



الواجب المنزلي :

التطبيق العملي لعينات جديدة لدرس اليوم

بانتظار إبداعكم يا رائعين

