

" What is Machine Learning?

# What's in it for you?

---

- ▶ Machine Learning
  - ▶ What is Machine Learning?
- ▶ Artificial Intelligence vs Machine Learning vs Deep Learning
- ▶ How does Machine Learning work?
- ▶ Types of Machine Learning
- ▶ Machine Learning Pre-requisites
- ▶ Applications of Machine Learning





Today, let me tell  
you what is Machine  
Learning!



**Machine Learning** works on the development of computer programs that can access data and use it to automatically learn and improve from experience!



# Watch Robot Builder Construct House In Two Days

It is smart enough to leave spaces in the brickwork for wiring and plumbing, and can even cut and shape bricks to size.

**sky** NEWS

10:22, UK,

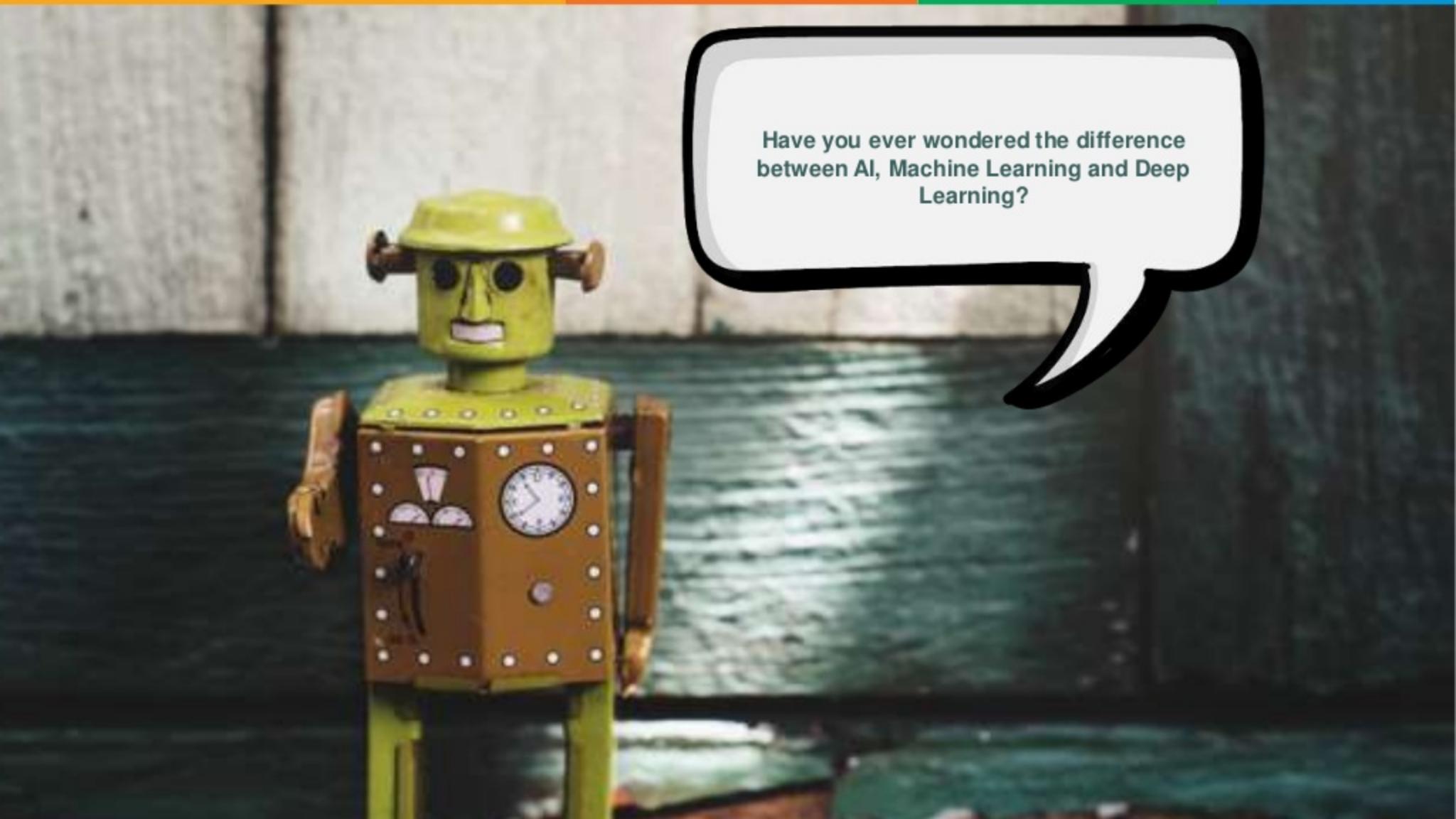
Friday 29 July 2016



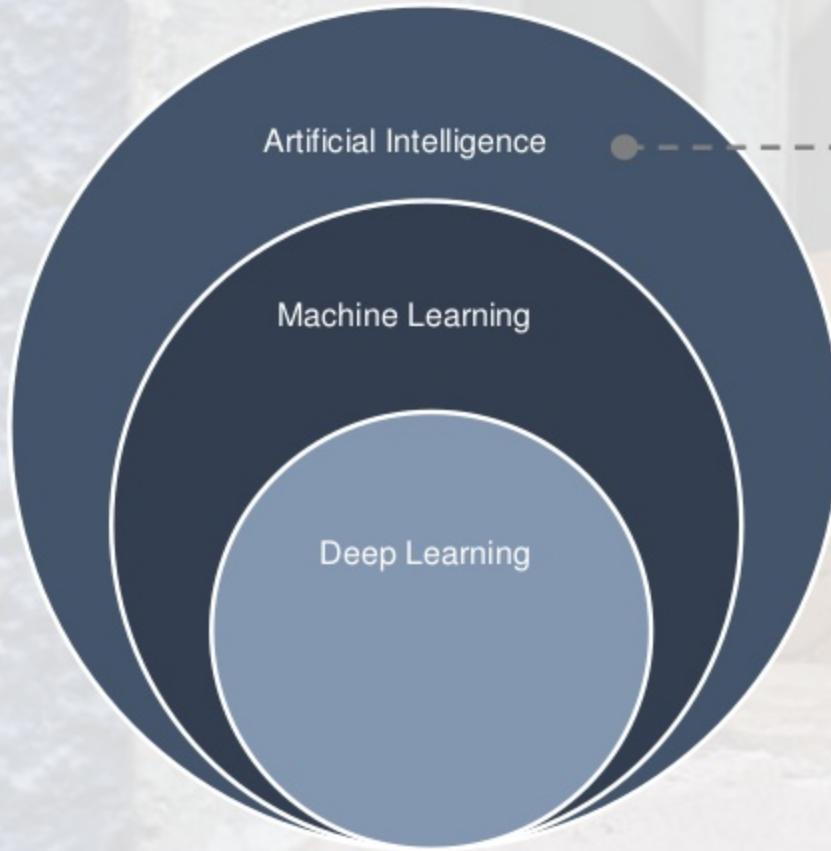


- 1 Play your favorite music
- 2 Order pizza from Dominos
- 3 Voice control your home
- 4 Request rides from Uber

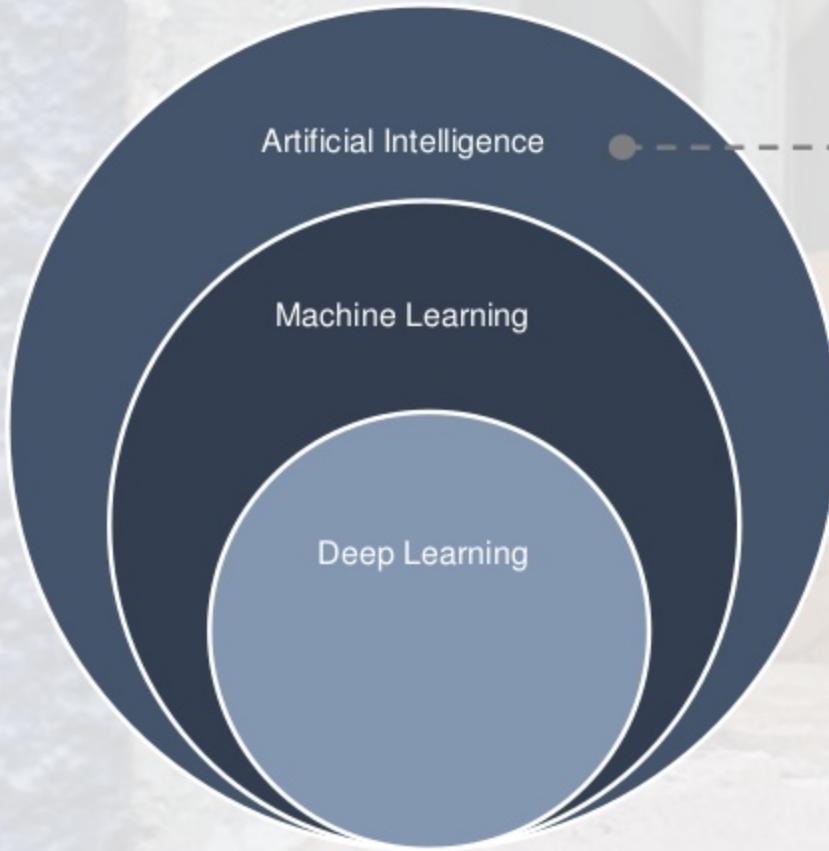
Amazon Echo - relies on Machine Learning, and with more data, it becomes more accurate!



Have you ever wondered the difference  
between AI, Machine Learning and Deep  
Learning?

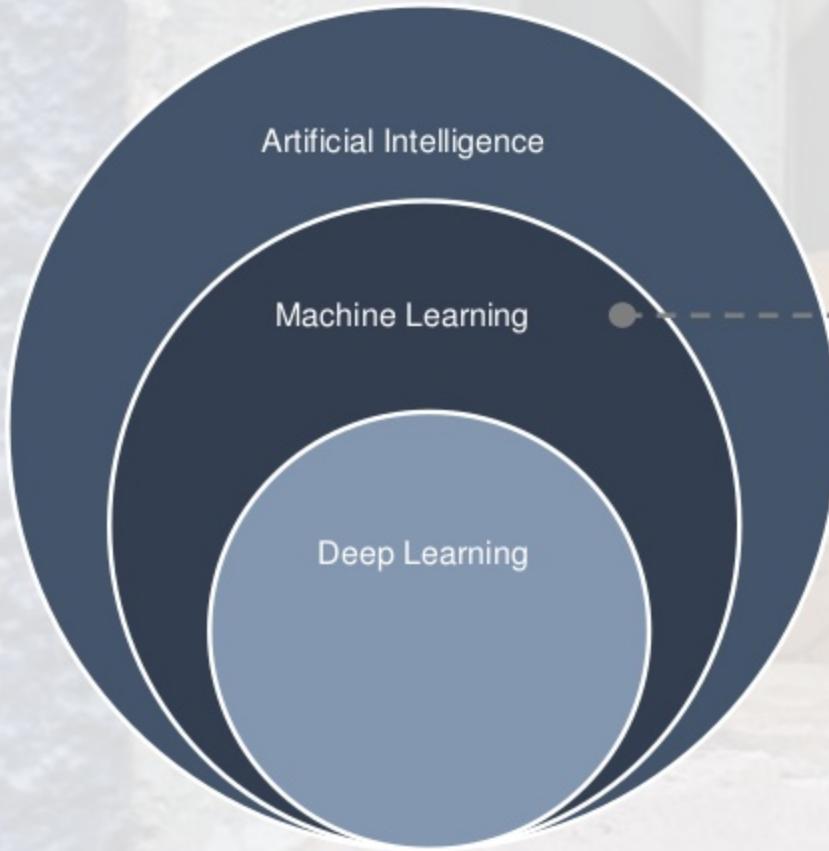


A technique which enables  
machines to mimic human behavior

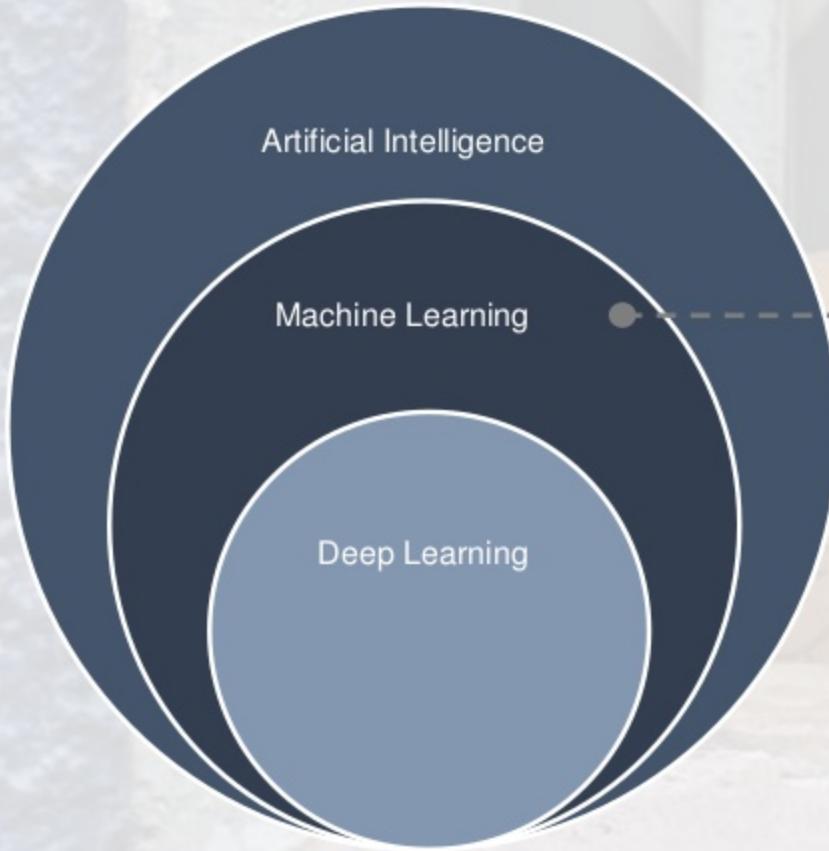


A technique which enables machines to mimic human behavior

- IBM Deep Blue Chess
- Electronic Game Characters

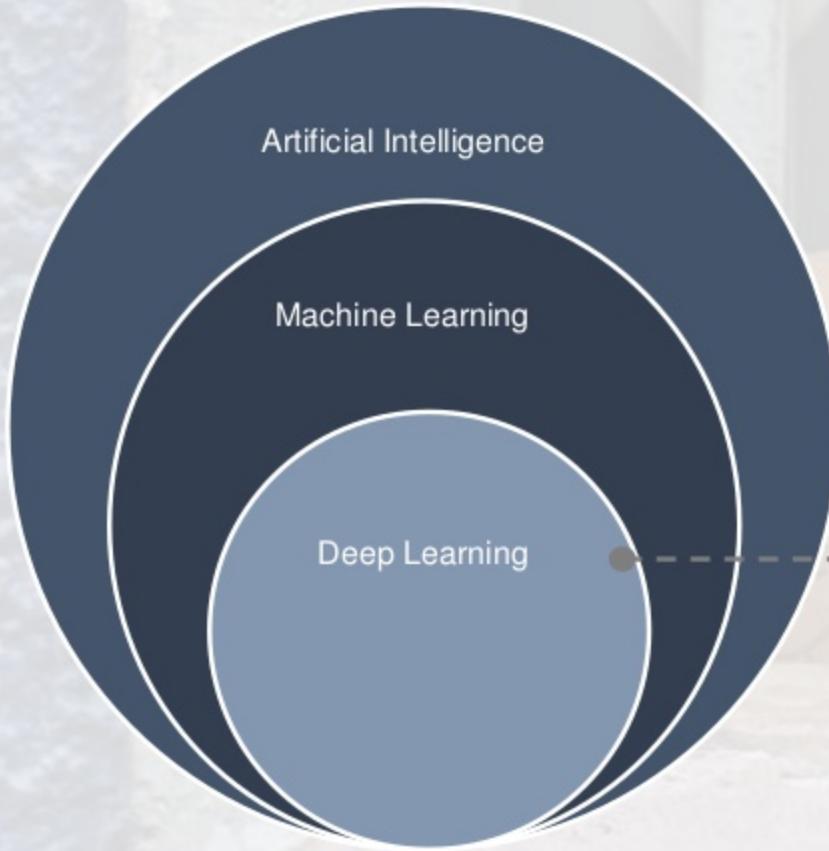


A technique which uses statistical methods, enabling machines to learn from their past data

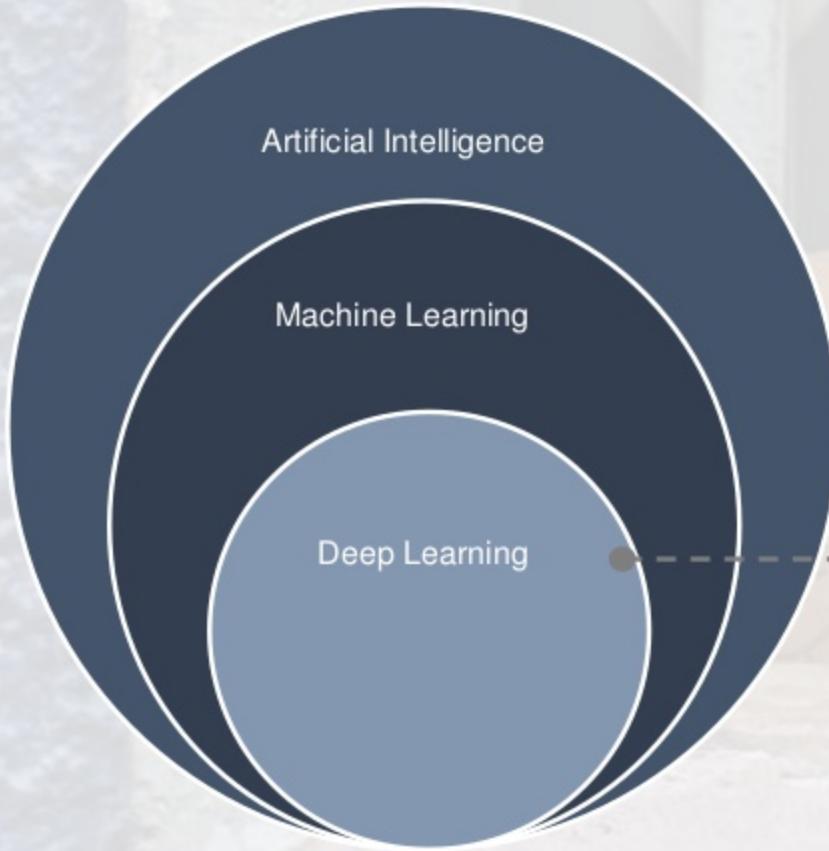


A technique which uses statistical methods, enabling machines to learn from their past data

- IBM Watson
- Google Search Algorithm
- Email Spam Filter

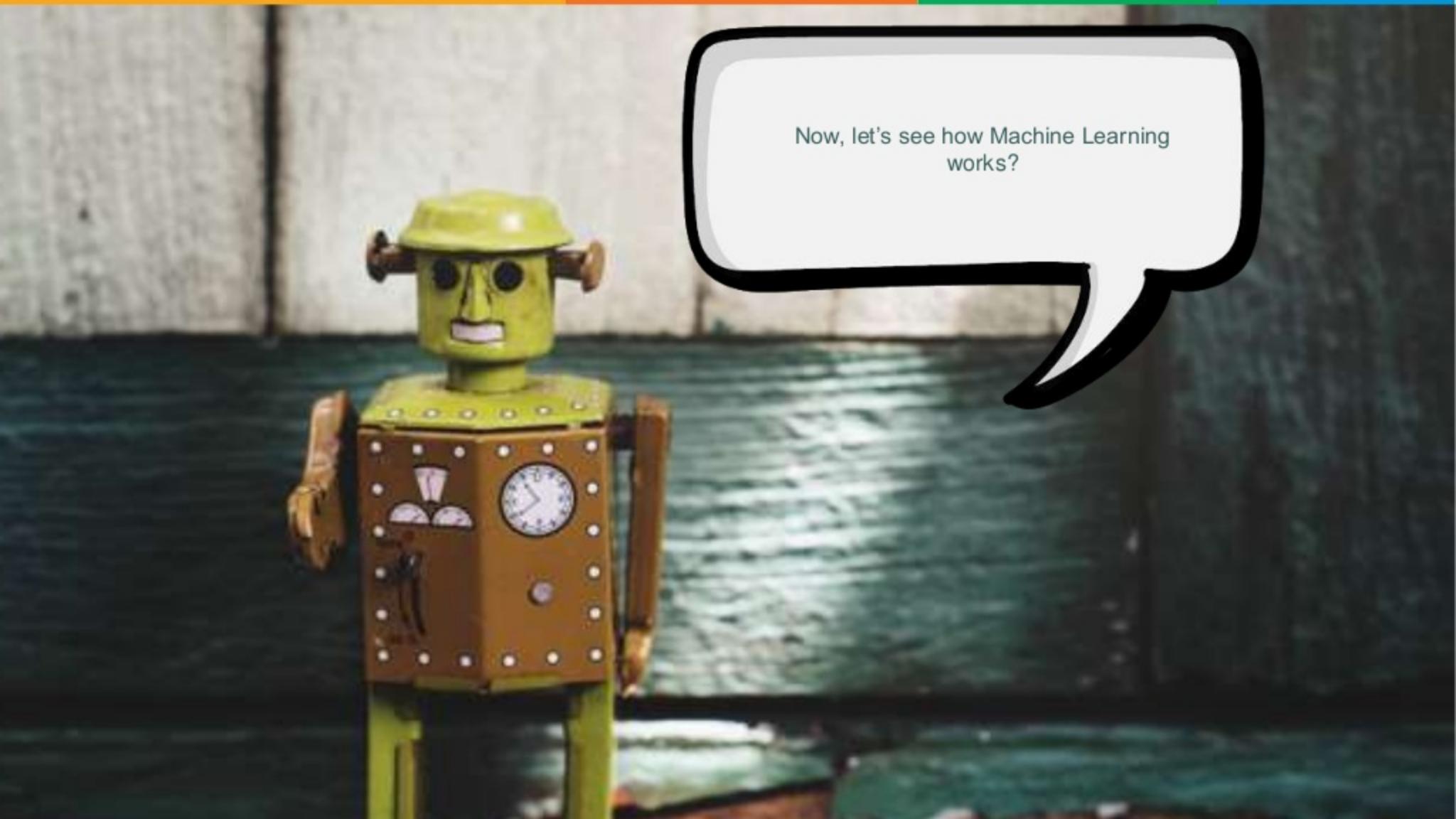


Subset of Machine Learning,  
composing algorithms that allow a  
model to train itself and perform  
tasks

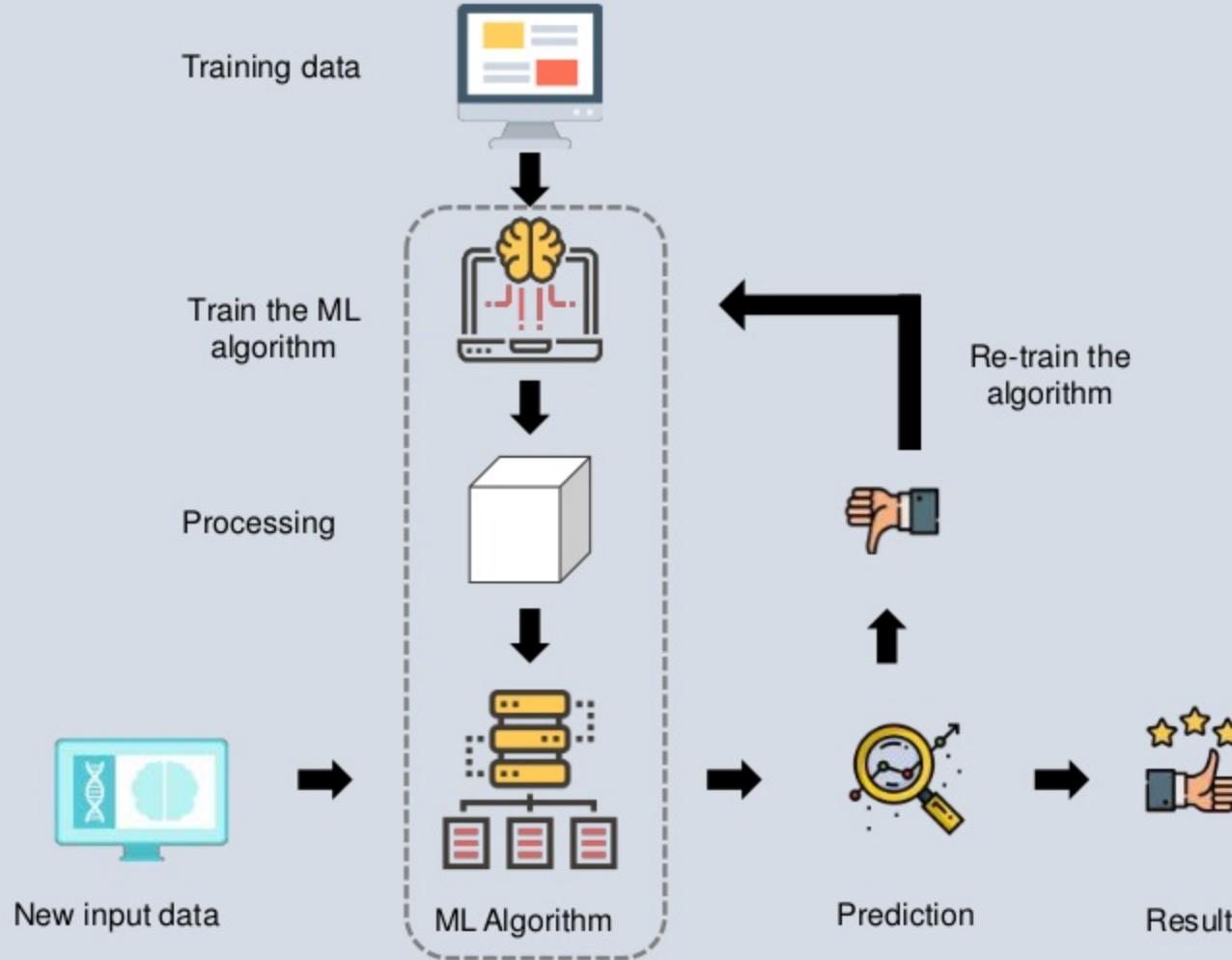


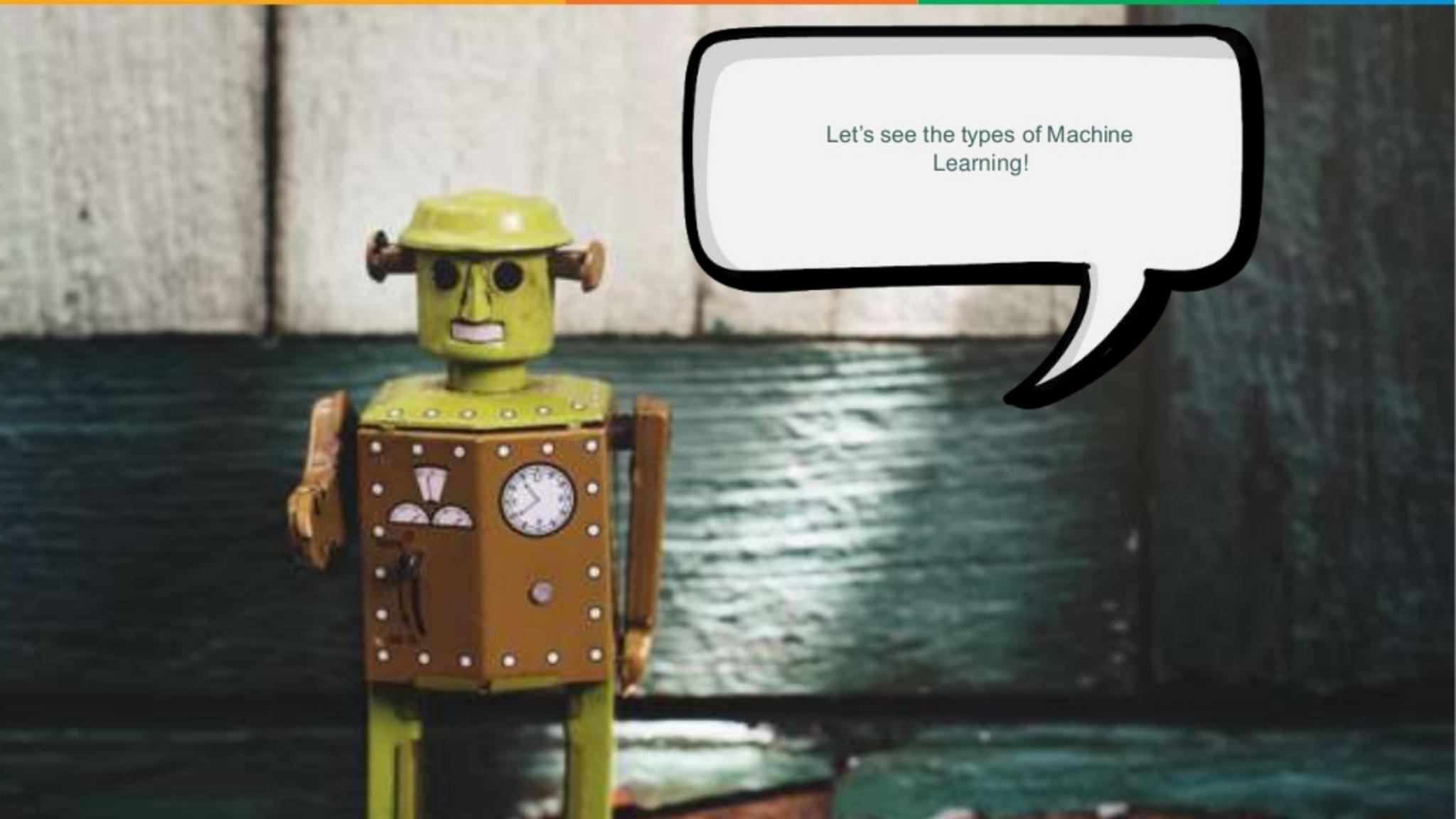
Subset of Machine Learning,  
composing algorithms that allow a  
model to train itself and perform  
tasks

- Alpha Go
- Natural Speech Recognition

A small, hand-made cardboard robot stands on a dark, textured surface. The robot has a yellow cylindrical head with two black circular eyes and a simple mouth. Its body is a brown rectangular box decorated with white polka dots and a small illustration of a factory or industrial scene. It has two brown arm-like extensions. A speech bubble originates from the robot's head, containing the text.

Now, let's see how Machine Learning  
works?



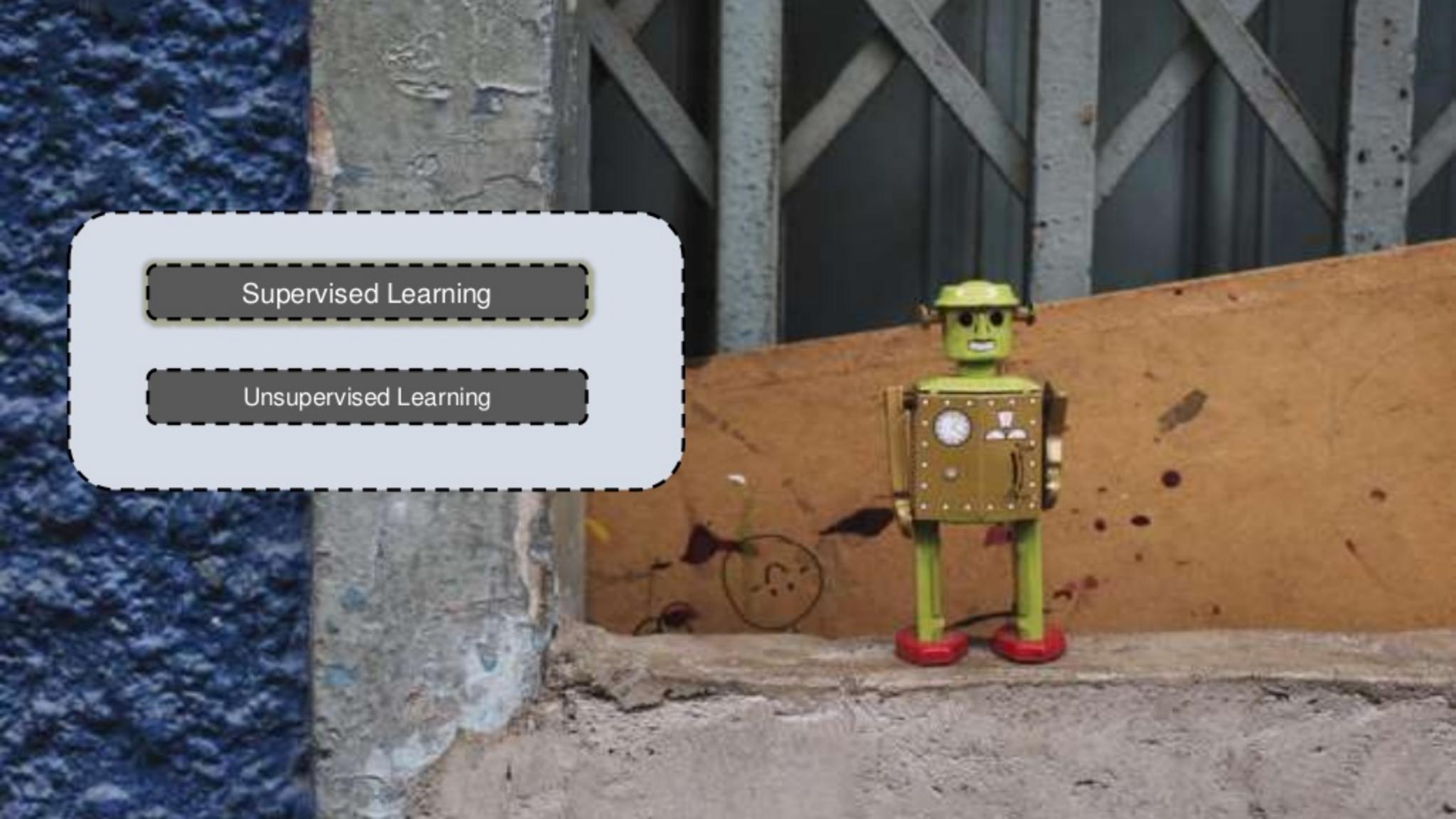


Let's see the types of Machine Learning!

A photograph of a small, green, toy-like robot standing on a wooden surface. The robot has a rectangular body with rivets, a head with two black antennae, and red circular feet. It is positioned in front of a dark, textured wall. A white speech bubble with a black dashed border is overlaid on the image. The top part of the bubble contains the text "Supervised Learning".

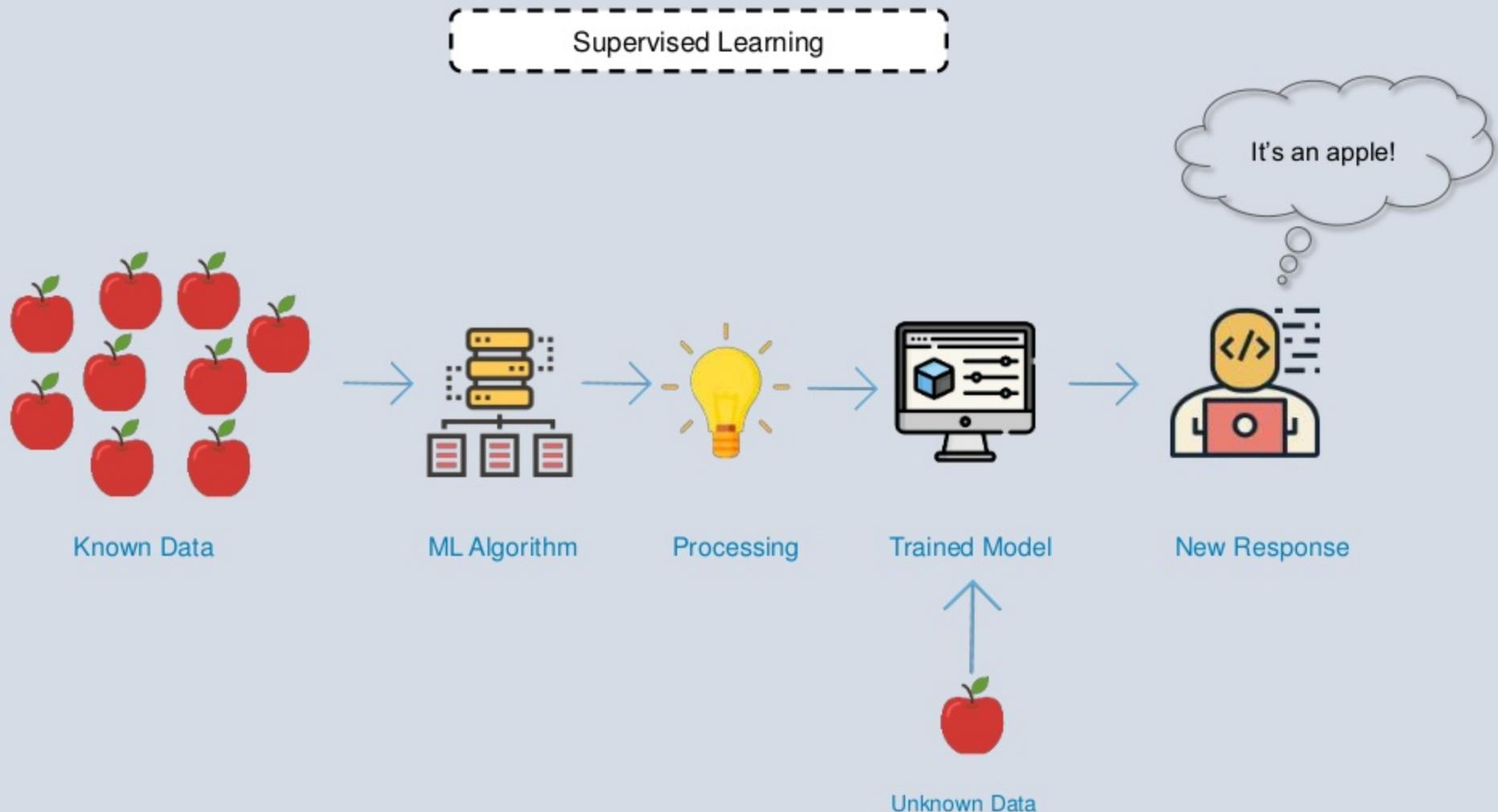
Supervised Learning

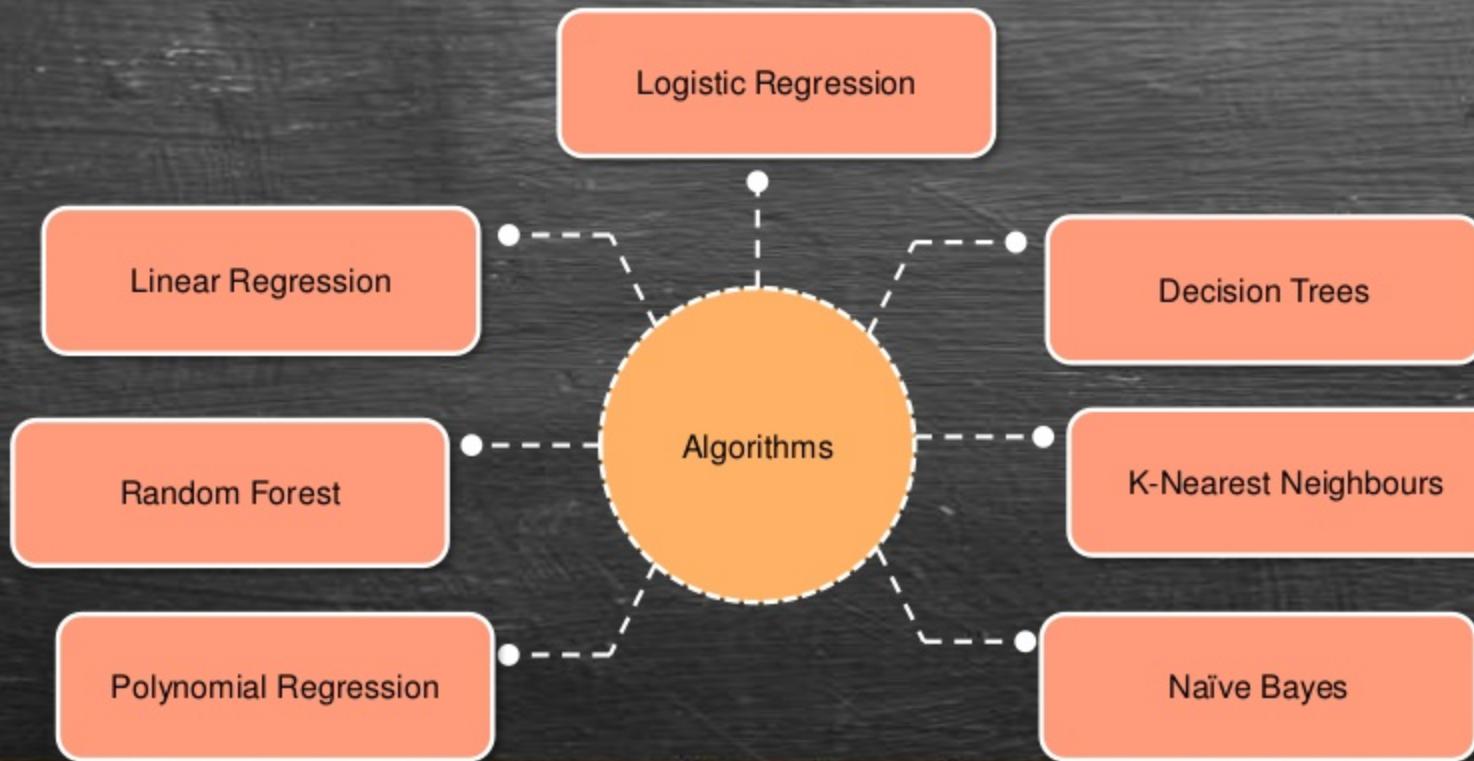
Unsupervised Learning

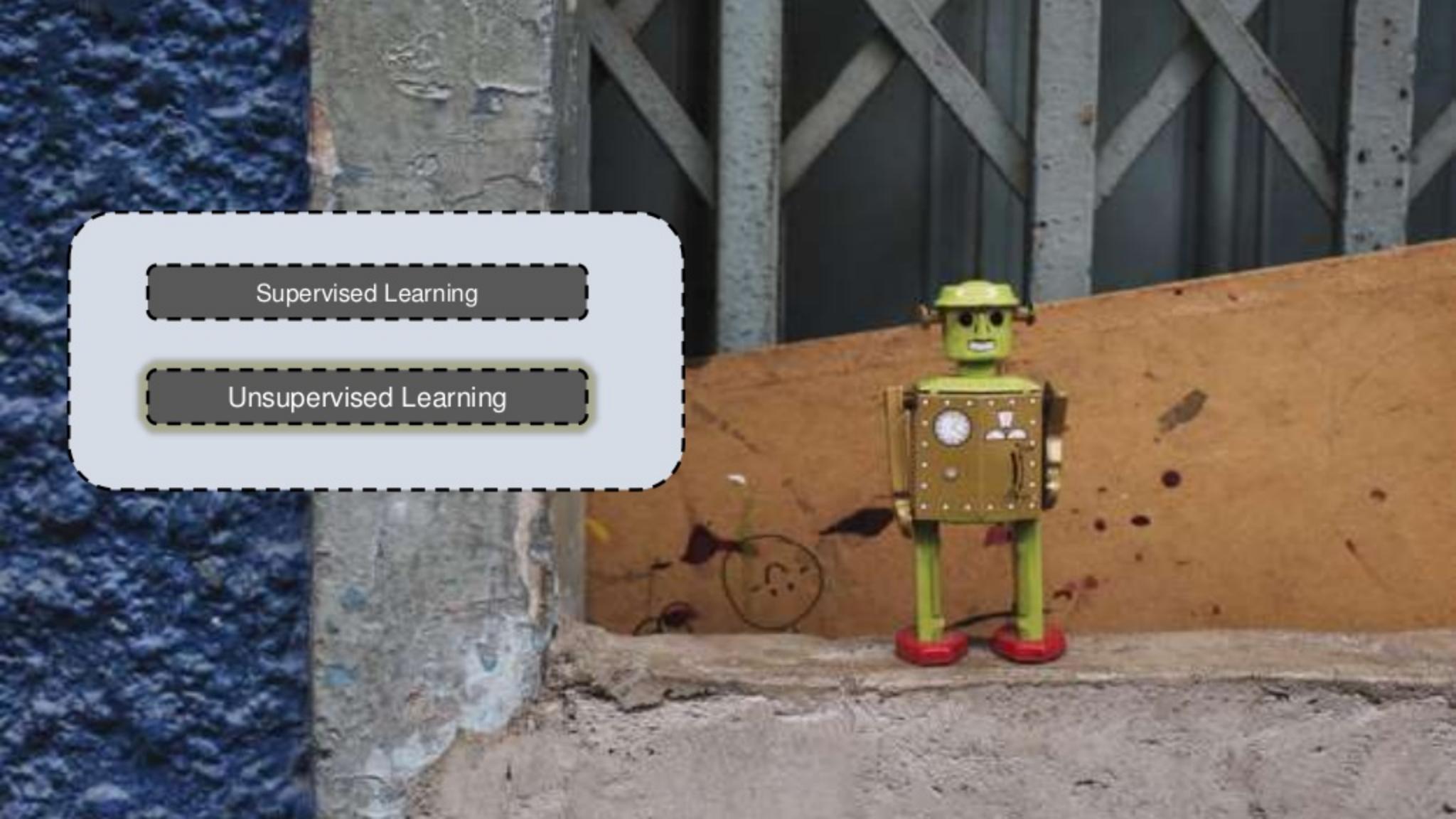


Supervised Learning

Unsupervised Learning

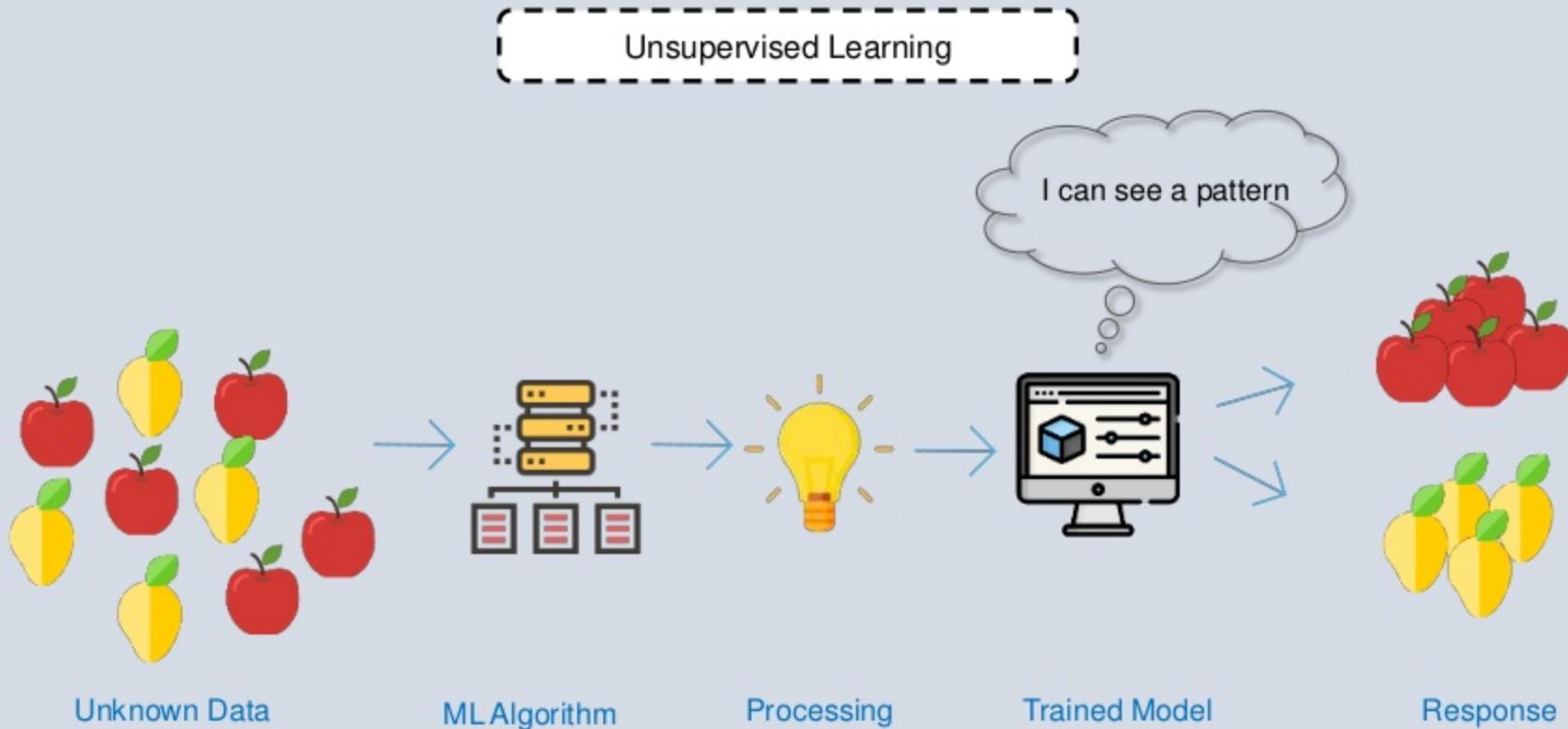


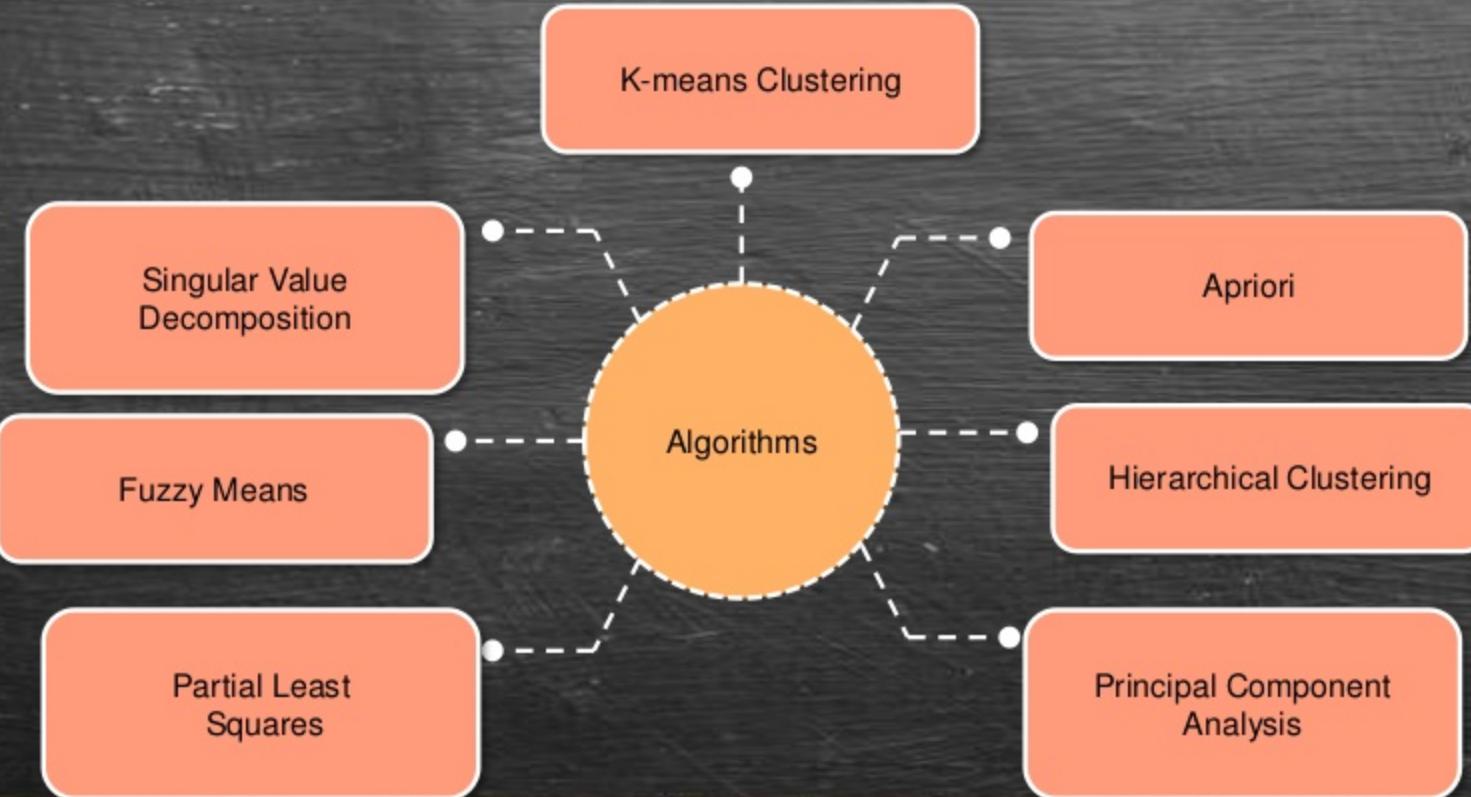




Supervised Learning

Unsupervised Learning







Machine Learning  
Pre-requisites!

Computer Science  
Fundamentals and  
Programming



Computer Science  
Fundamentals and  
Programming

Intermediate Statistical  
Knowledge



A photograph of a small, green, steampunk-style robot standing on a wooden surface. The robot has a rectangular body with rivets, a single circular eye, and a small mouth. It has thin legs and red circular feet. In the background, there's a weathered metal structure with diagonal bracing.

Computer Science  
Fundamentals and  
Programming

Intermediate Statistical  
Knowledge

Linear Algebra and  
Intermediate Calculus

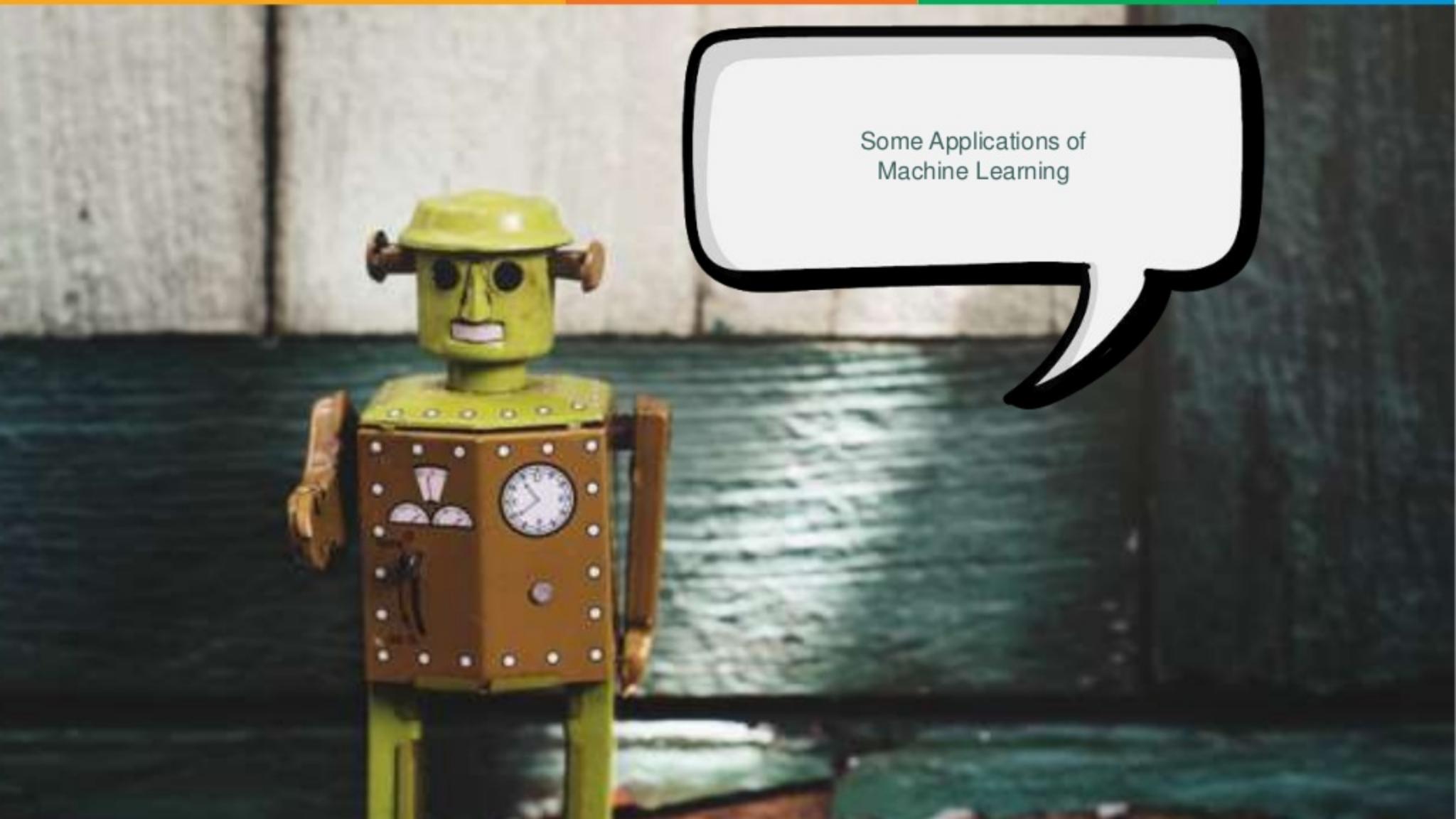
The background of the image shows a close-up of a weathered metal structure with visible rivets and a wooden board leaning against it. A small, green, three-legged robot with a boxy torso and a single antenna on its head stands on the wood. It has a simple face with two black dots for eyes and a small mouth. A black cable runs from its left side.

Computer Science  
Fundamentals and  
Programming

Intermediate Statistical  
Knowledge

Linear Algebra and  
Intermediate Calculus

Data Wrangling and  
Cleaning

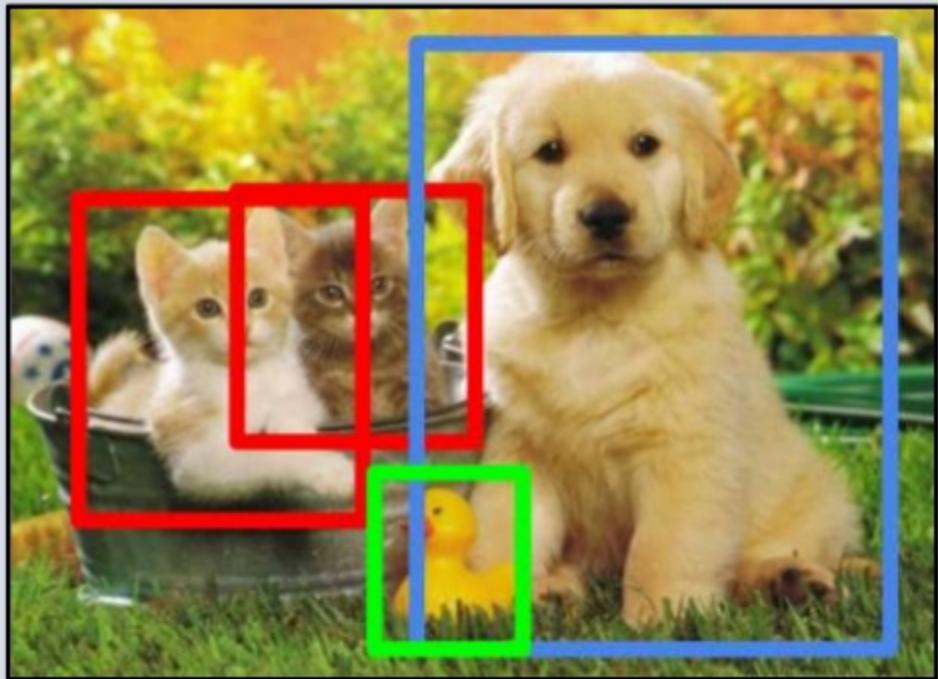


Some Applications of  
Machine Learning

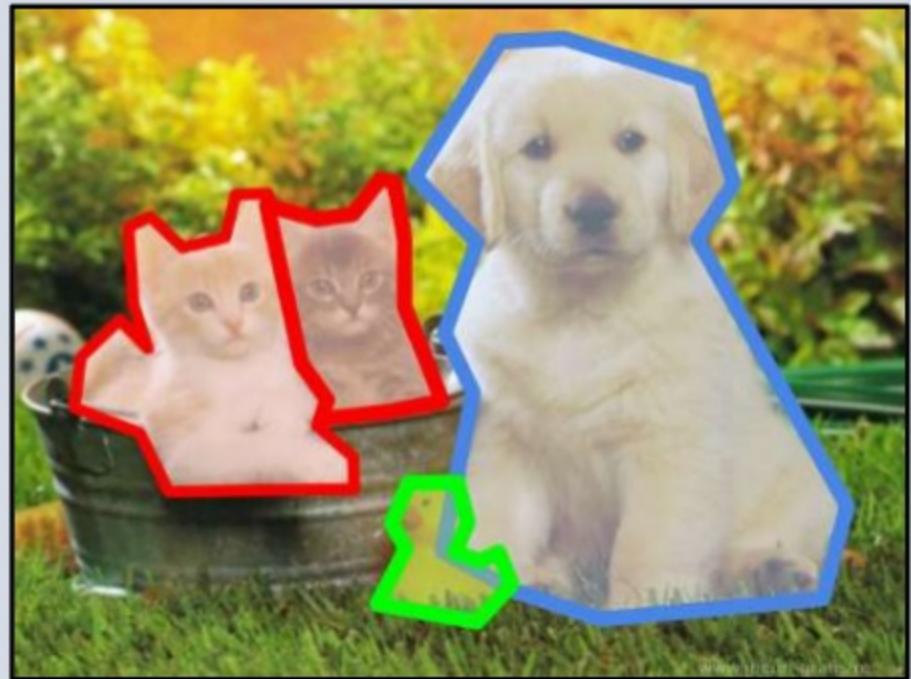


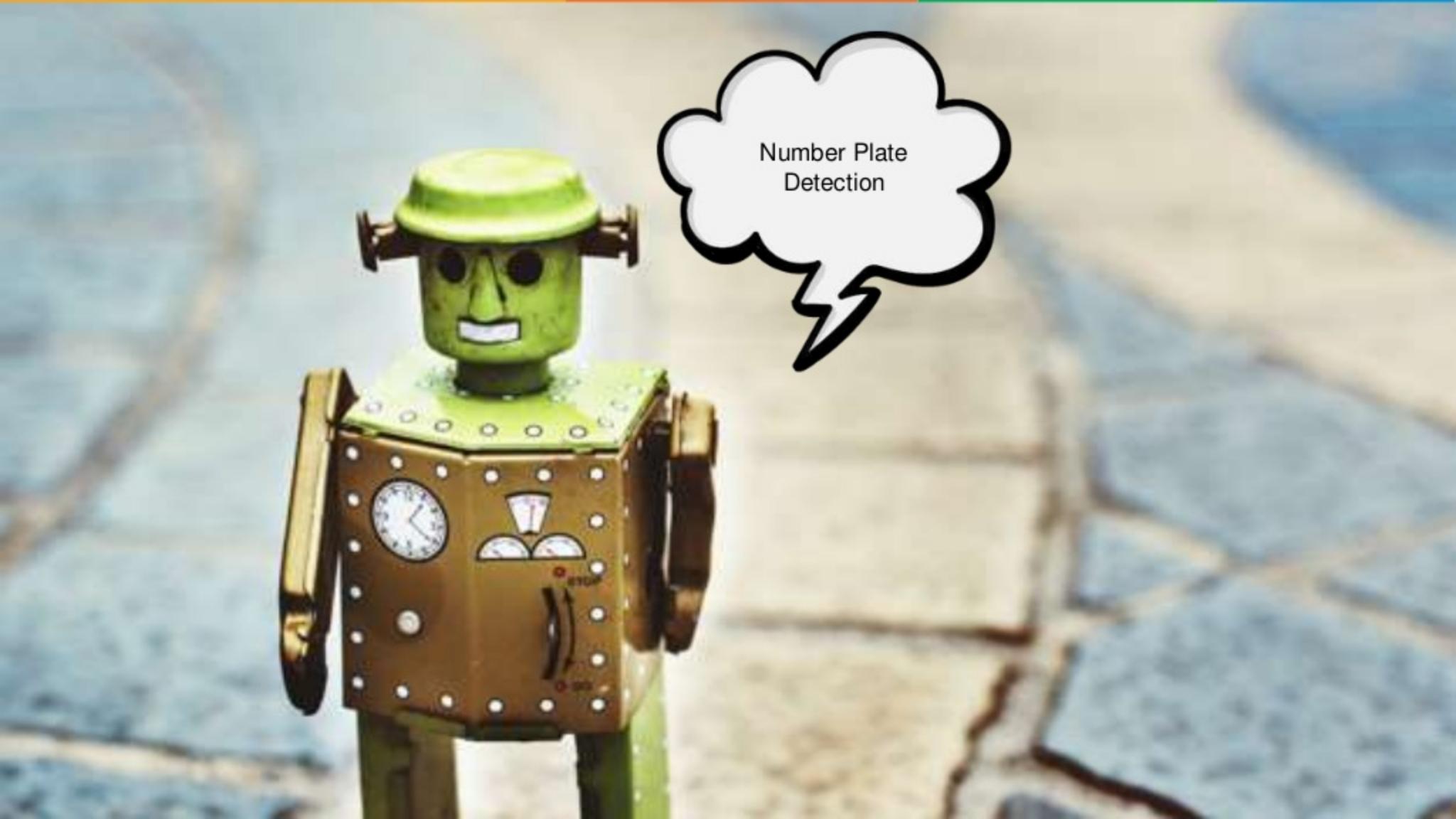
Instance  
Segmentation

Object Detection



Instance Segmentation





A small green and gold robot with a round head and a rectangular body stands on a brick-paved ground. It has a thought bubble above its head containing the text "Number Plate Detection".

Number Plate  
Detection



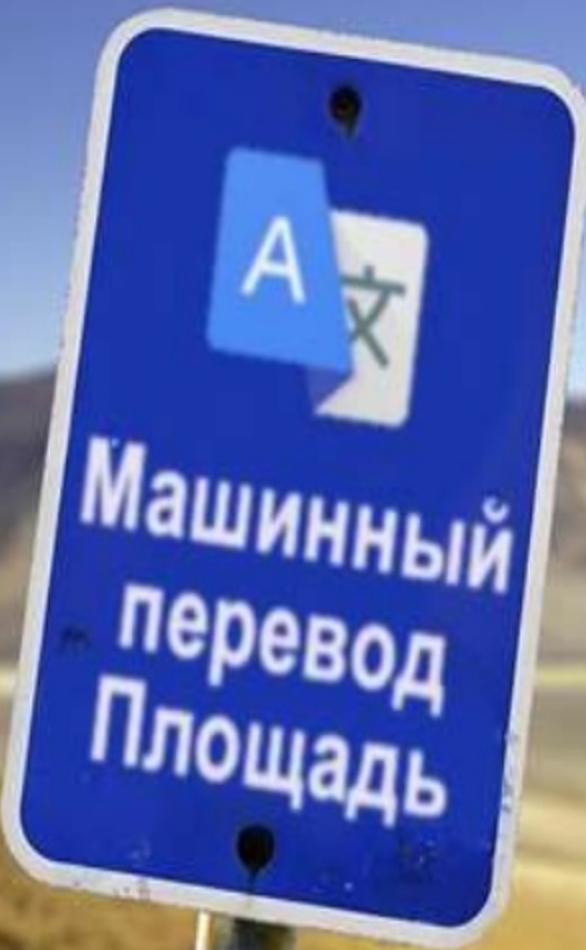
S 112  
1315



S112  
1315

A small, green and gold robot with a simple face and a metallic body decorated with rivets and a clock. It is standing on a brick-paved ground. A thought bubble above its head contains the text "Automatic Translation" and features a lightning bolt symbol at the bottom right.

Automatic  
Translation

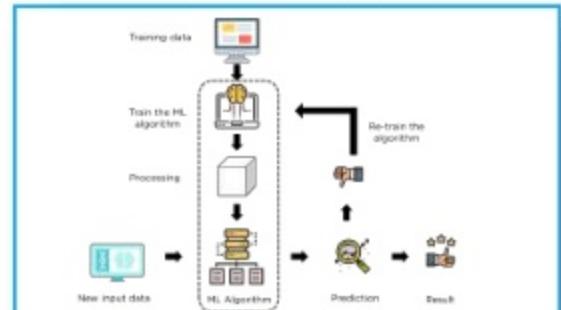


# Summary

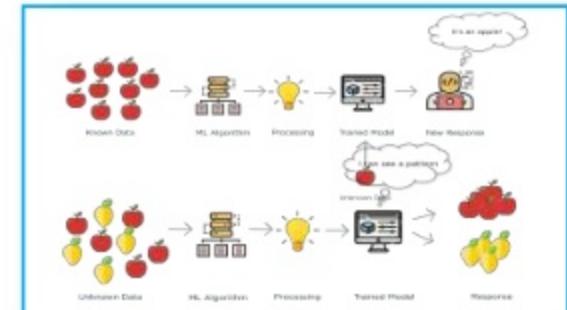
## What is Machine learning



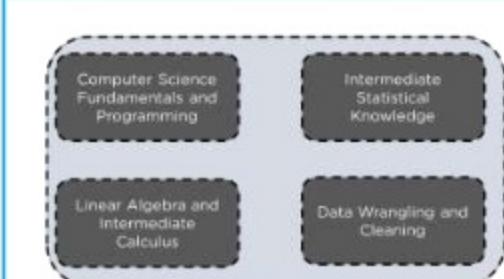
## Machine learning workflow



## Type of Machine learning



## Machine learning pre-requisites



## Applications of machine learning





THANK YOU

For more information, visit

[www.simplilearn.com](http://www.simplilearn.com)

simplilearn