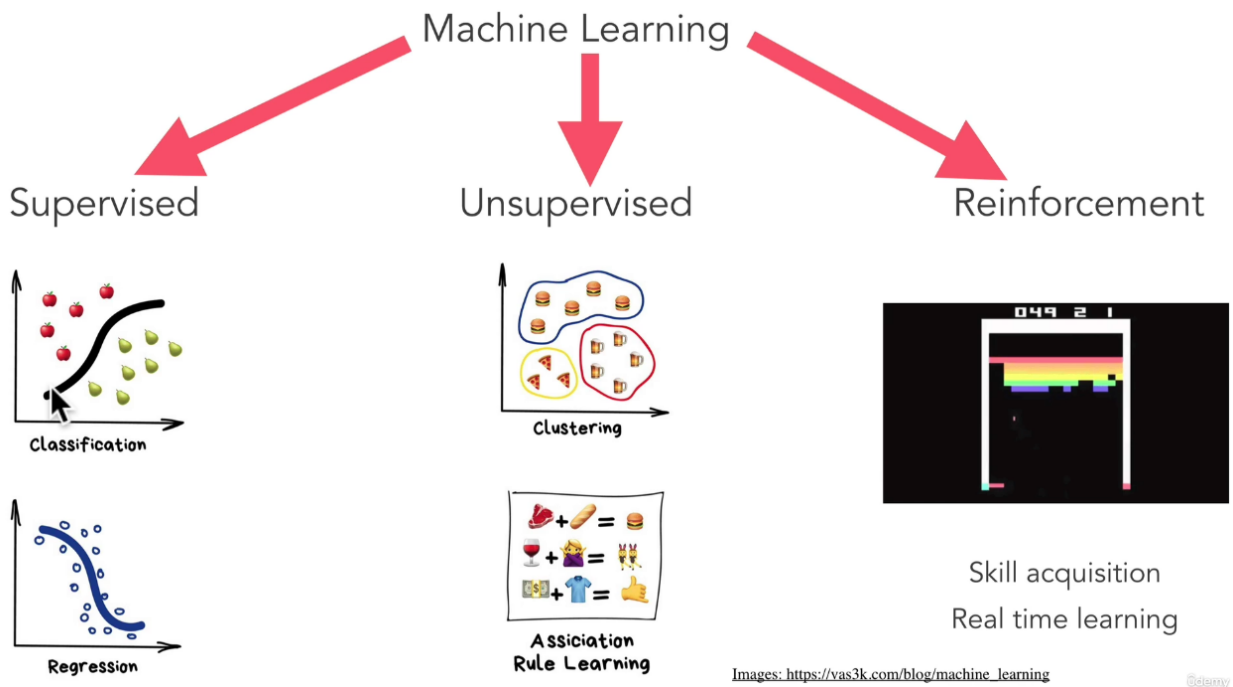
https://www.udemy.com/course/complete-machine-learning-and-data-science-zero-to-mastery

What is machine learning?

Machine learning is a branch of artificial intelligence (AI) and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy.

1. https://teachablemachine.withgoogle.com/
2. https://ml-playground.com/

Types Of Machine Learning:

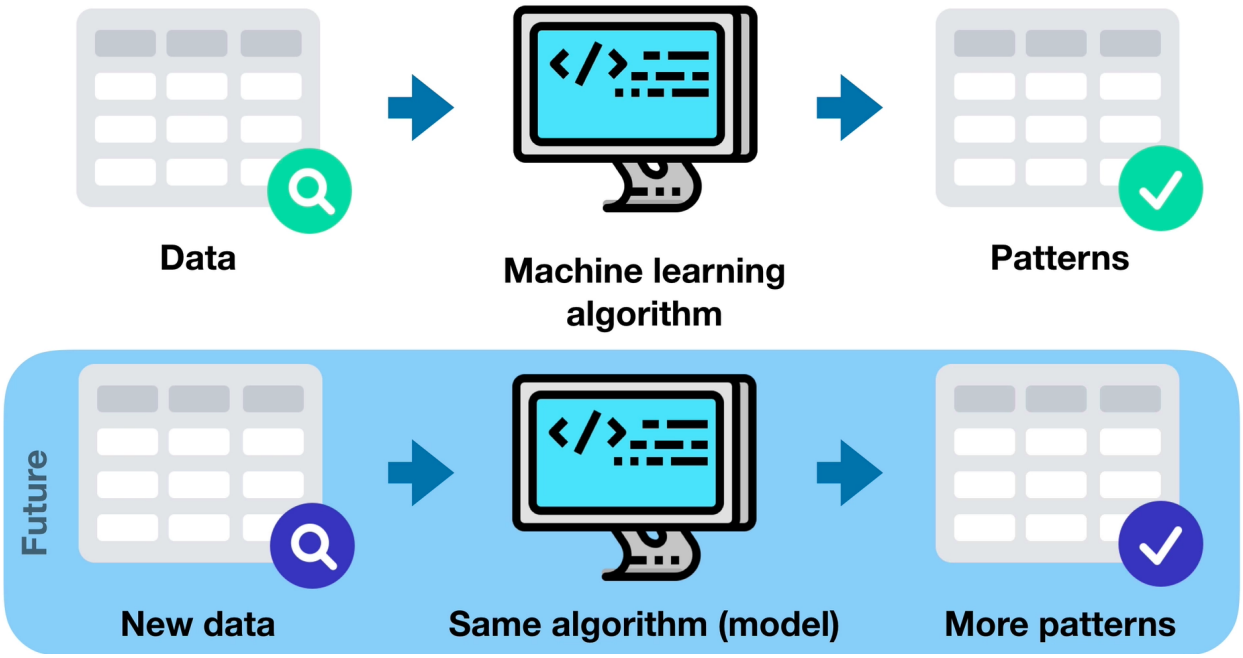


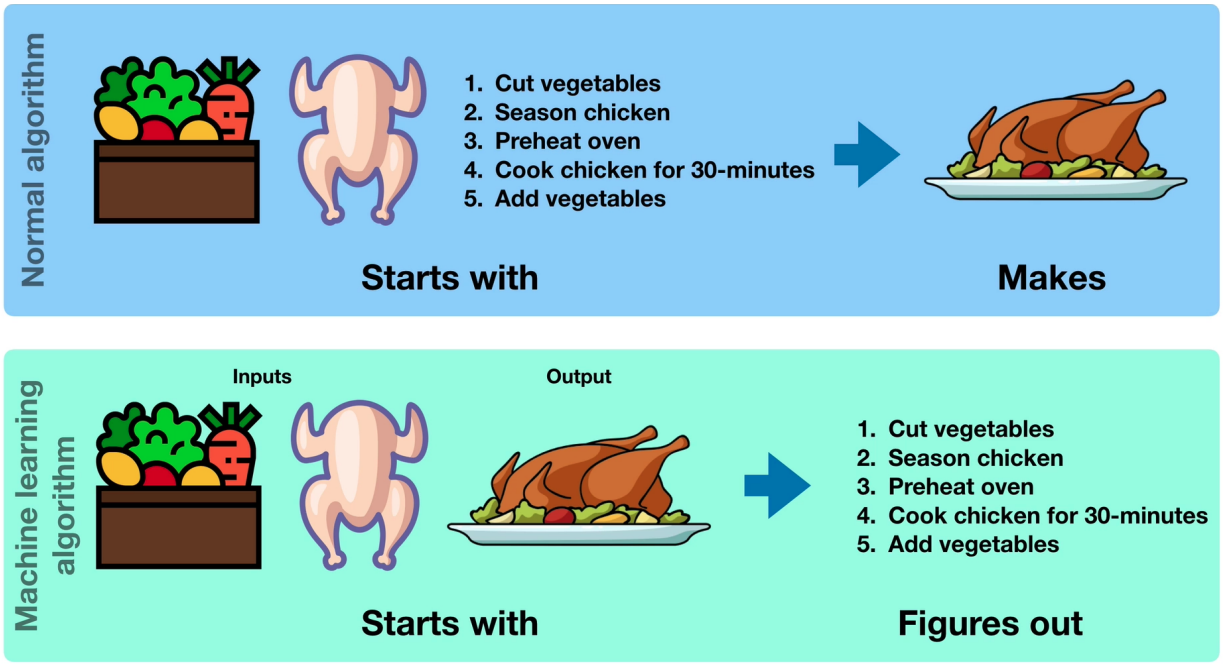
Learn from data and predict something.

Supervised learning, also known as supervised machine learning, is a subcategory of machine learning and artificial intelligence. It is defined by its use of labeled datasets to train algorithms to classify data or predict outcomes accurately.

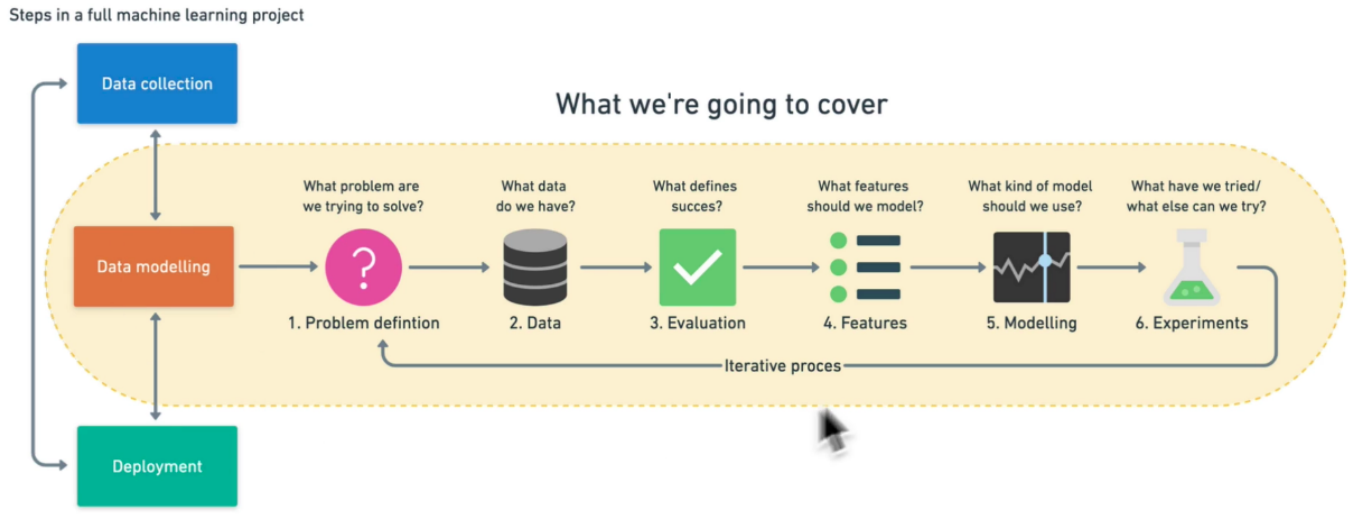
Unsupervised learning refers to the use of artificial intelligence (AI) algorithms to identify patterns in data sets containing data points that are neither classified nor labeled

Reinforcement learning is a machine learning training method based on rewarding desired behaviors and/or punishing undesired ones. In general, a reinforcement learning agent is able to perceive and interpret its environment, take actions and learn through trial and error.





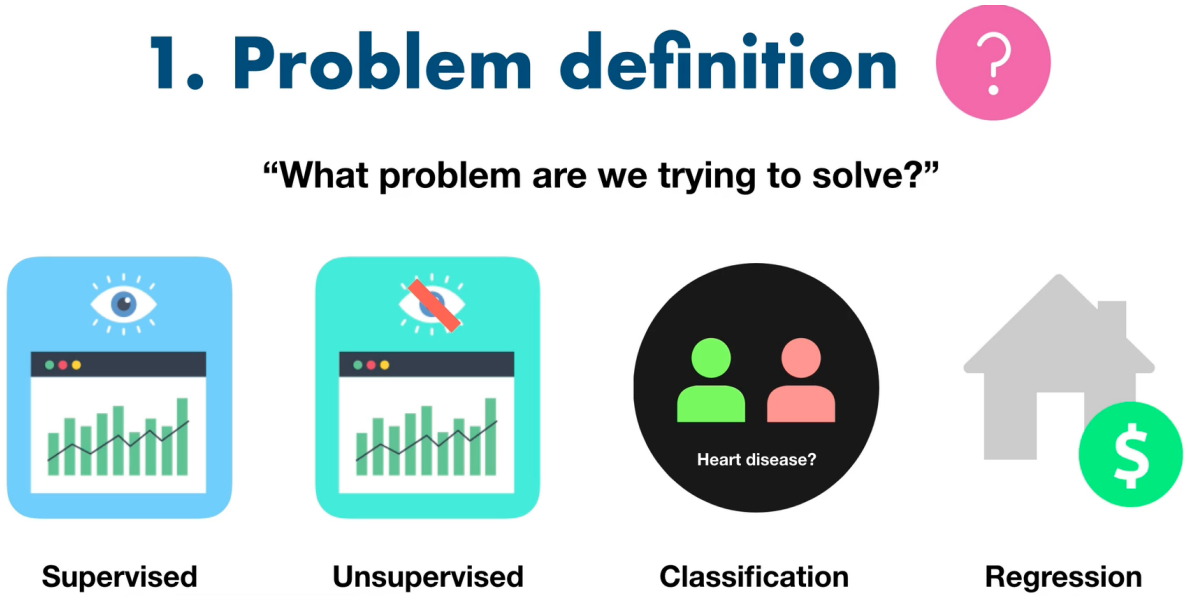
Building Machine Learning and Data Science Framework:



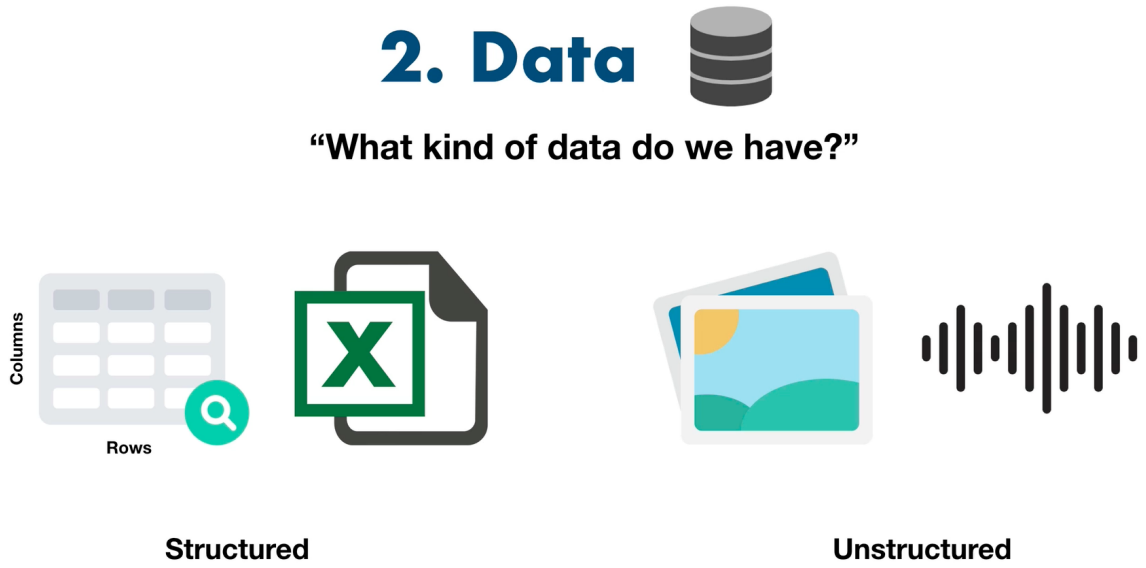
Yes	No
Write code	Overthink the process
Make mistakes	Try make things perfect
Build projects	Build things from scratch
Learn what matters	

6 Step Machine Learning Framework:

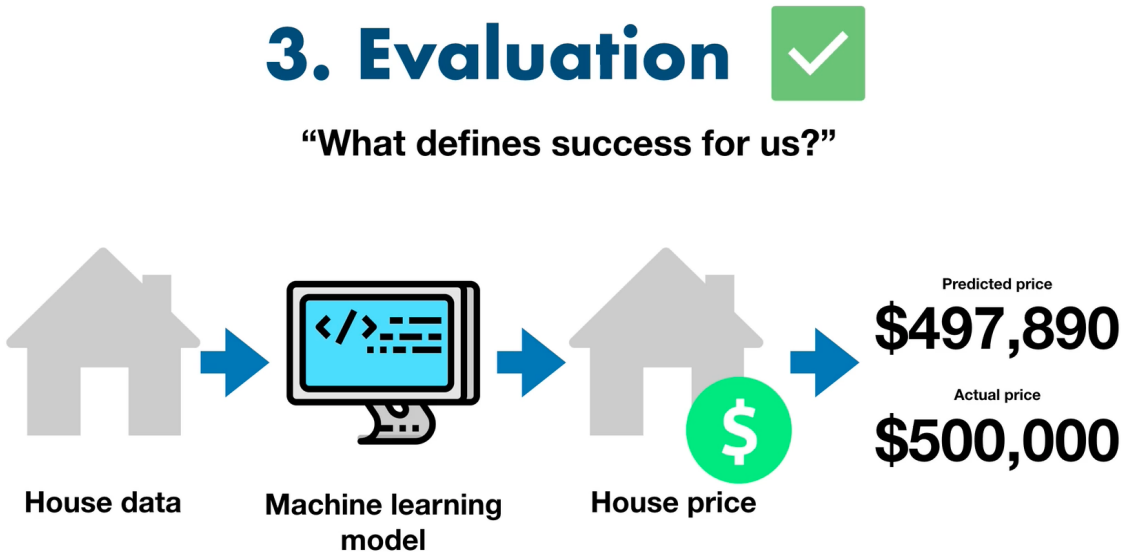
Step 1:



Step 2:


2. Data
"What kind of data do we have?"
Columns
Rows
Structured
Unstructured

Step 3:


3. Evaluation
"What defines success for us?"
House data
Machine learning model
House price
Predicted price
$497,890
Actual price
$500,000

Step 4:

4. Features

"What do we already know about the data?"

ID	Weight	Sex	Blood Pressure	Chest pain	Heart disease?
4326	110kg	M	120/80	4	Yes
5681	64kg	F	130/90	1	NO
7911	81kg	M	130/80	0	NO

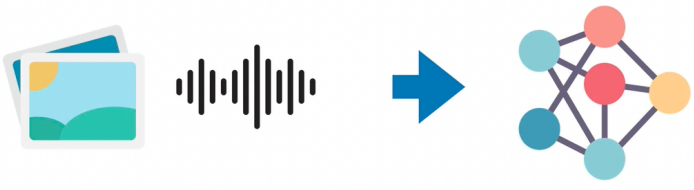
Table 1.0: Patient records

Step 5:

5. Modelling

"Based on our problem and data, what model should we use?"

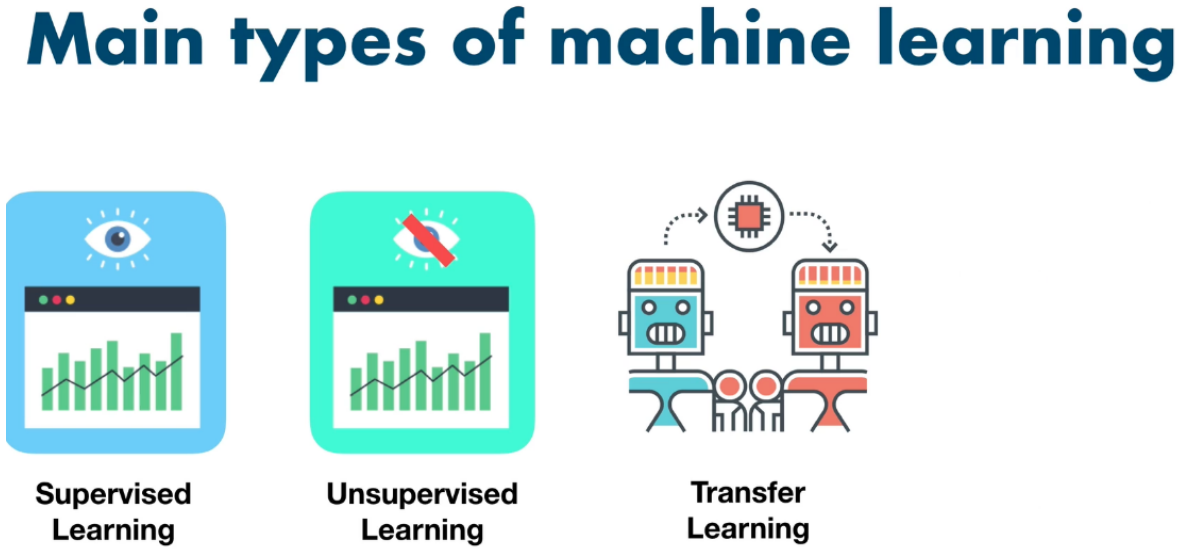
Problem 1 → Model 1



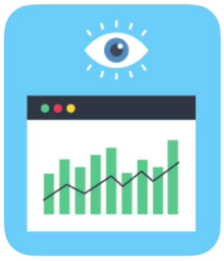
Problem 2 → Model 2

Step 6:

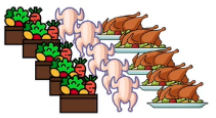

6. Experimentation
"How could we improve/what can we try next?"
Attempt
1
2
3


Main types of machine learning
Supervised Learning
Unsupervised Learning
Transfer Learning

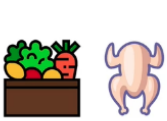
Supervised learning



Supervised Learning



Examples



Data Label

1. Cut vegetables
2. Season chicken with lots of spice
3. Preheat oven
4. Cook chicken for 30-minutes
5. Add vegetables

Instructions

Data Label

1. Cut vegetables
2. Season chicken
3. Preheat oven
4. Cook chicken for 30-minutes
5. Add vegetables

Instructions