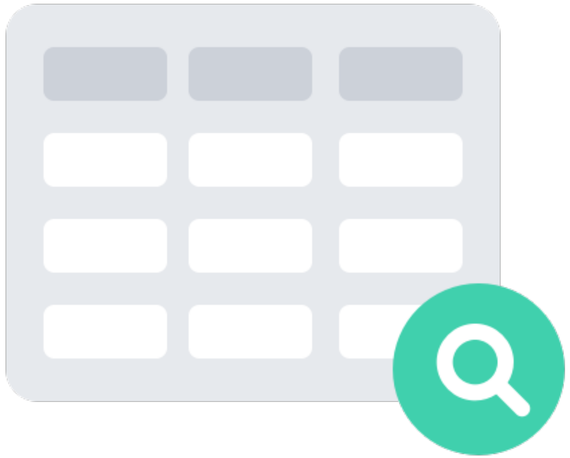
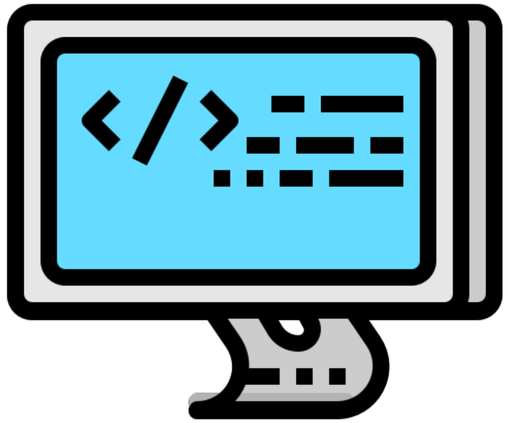
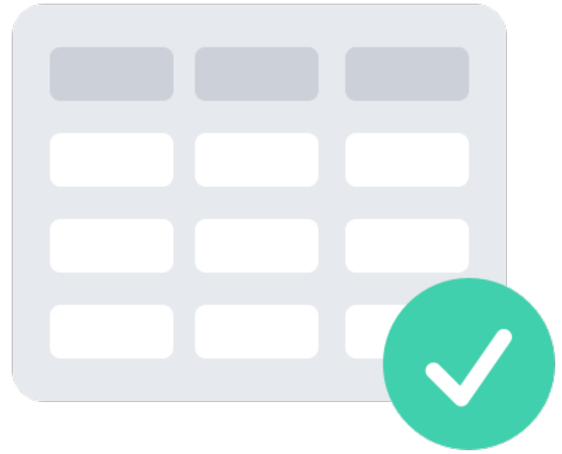
What is machine learning?



Data



Machine learning algorithm



Patterns

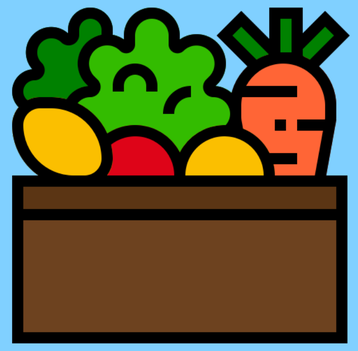
Future

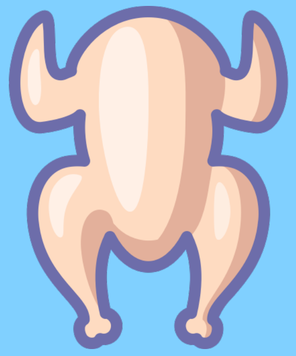
New data

Same algorithm (model)

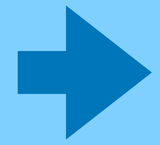
More patterns

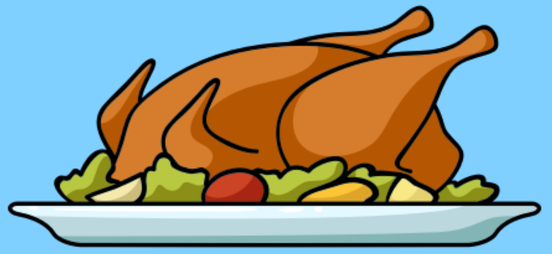
Normal algorithm





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



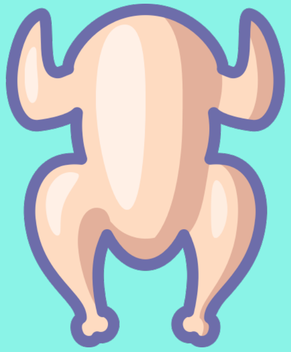


Starts with

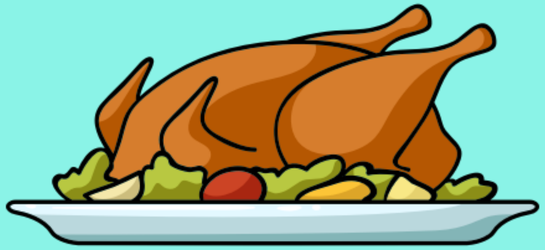
Makes

Machine learning algorithm

Inputs



Output



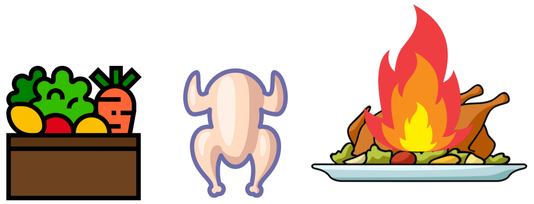
1. Cut vegetables
2. Season chicken
3. Preheat oven
4. Cook chicken for 30-minutes
5. Add vegetables

Starts with

Figures out

Attempt

1

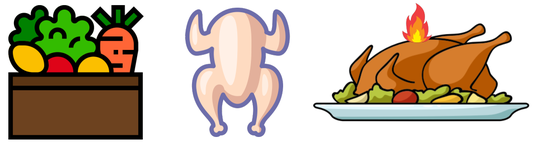


1. Cut vegetables
2. Season chicken with lots of spice
3. Preheat oven
4. Cook chicken for 30-minutes
5. Add vegetables

2

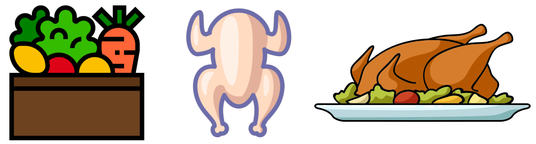
1. Cut vegetables
2. Season chicken with extra spice
3. Preheat oven
4. Cook chicken for 30-minutes
5. Add vegetables

3



1. Cut vegetables
2. Season chicken a lil' extra spice
3. Preheat oven
4. Cook chicken for 30-minutes
5. Add vegetables

4



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

⋮

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

100

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

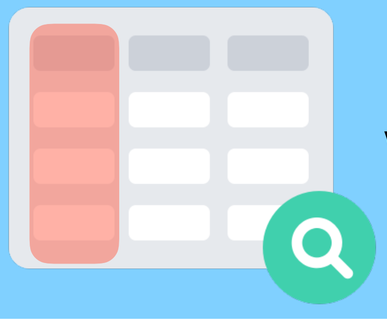
Machine learning algorithms may try 1000's of times to find the right instructions.

Data science

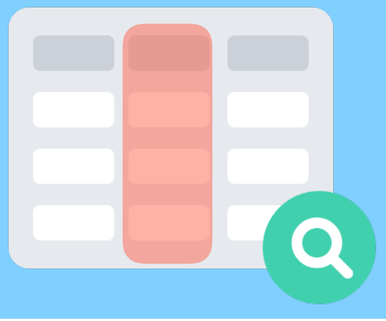
Data analysis

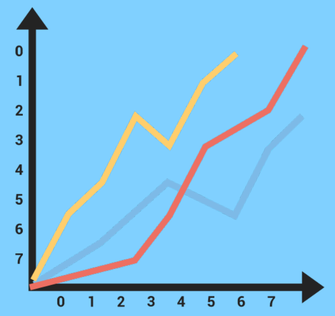
Data

vs.

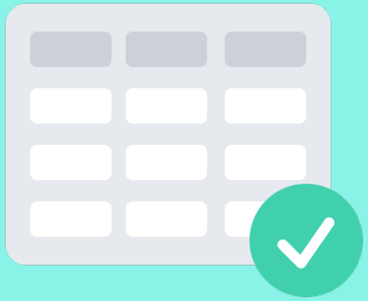


vs.





Machine learning



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

Instructions in your daily life?