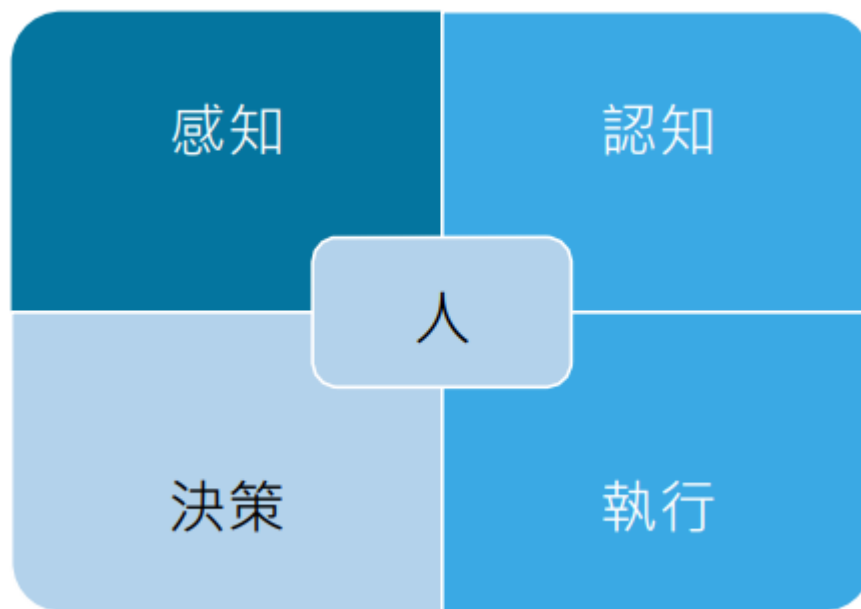


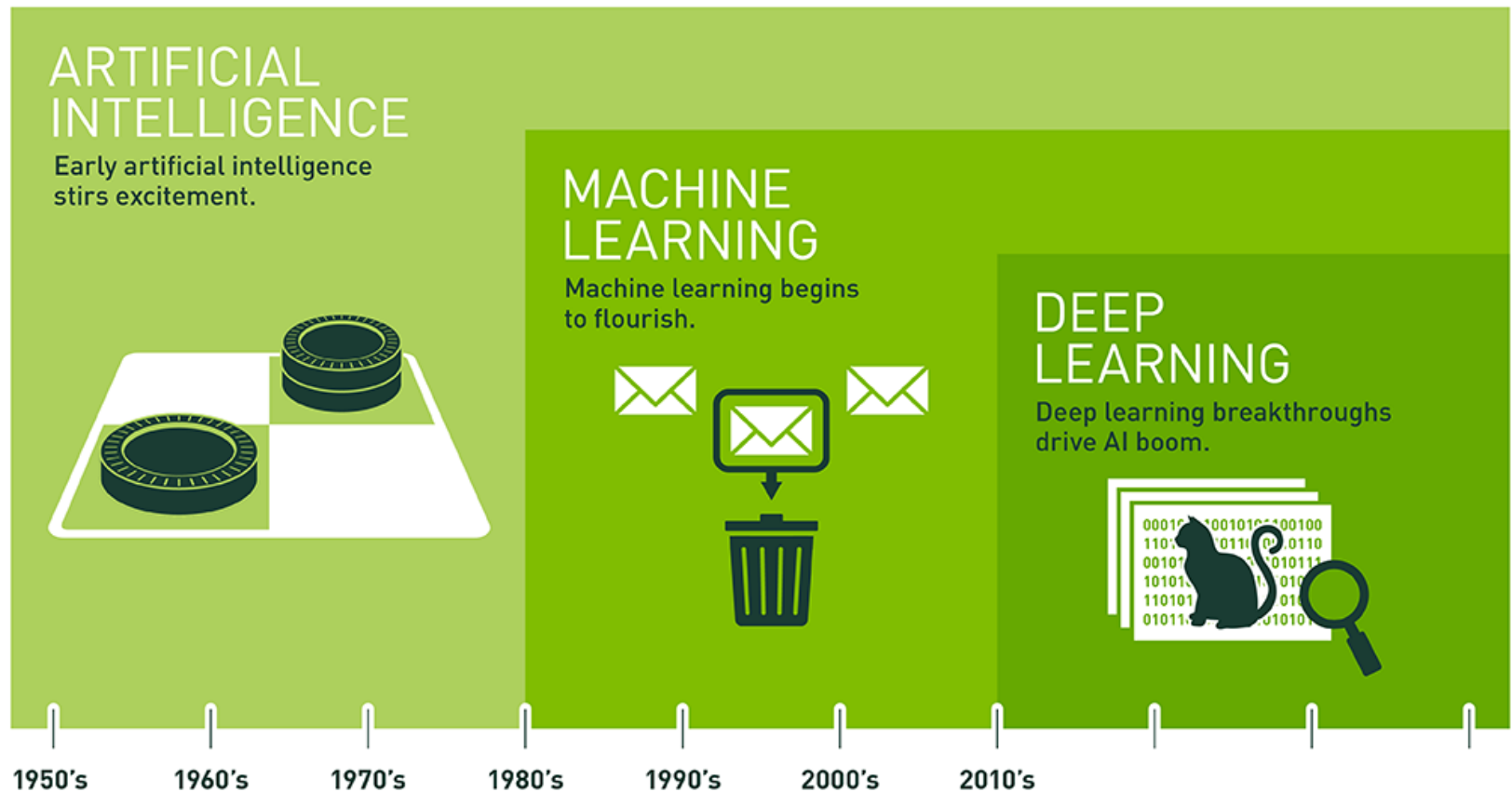
# 機器學習簡介與體驗

# 何謂人工智慧(Artificial Intelligence) ？

AI是一門利用在電腦或智慧型機器上模擬智慧行為的科學。亦即電腦或智慧型機器能夠展現類似人類的行為特徵，包括：知識、推理、常識、學習與決策。

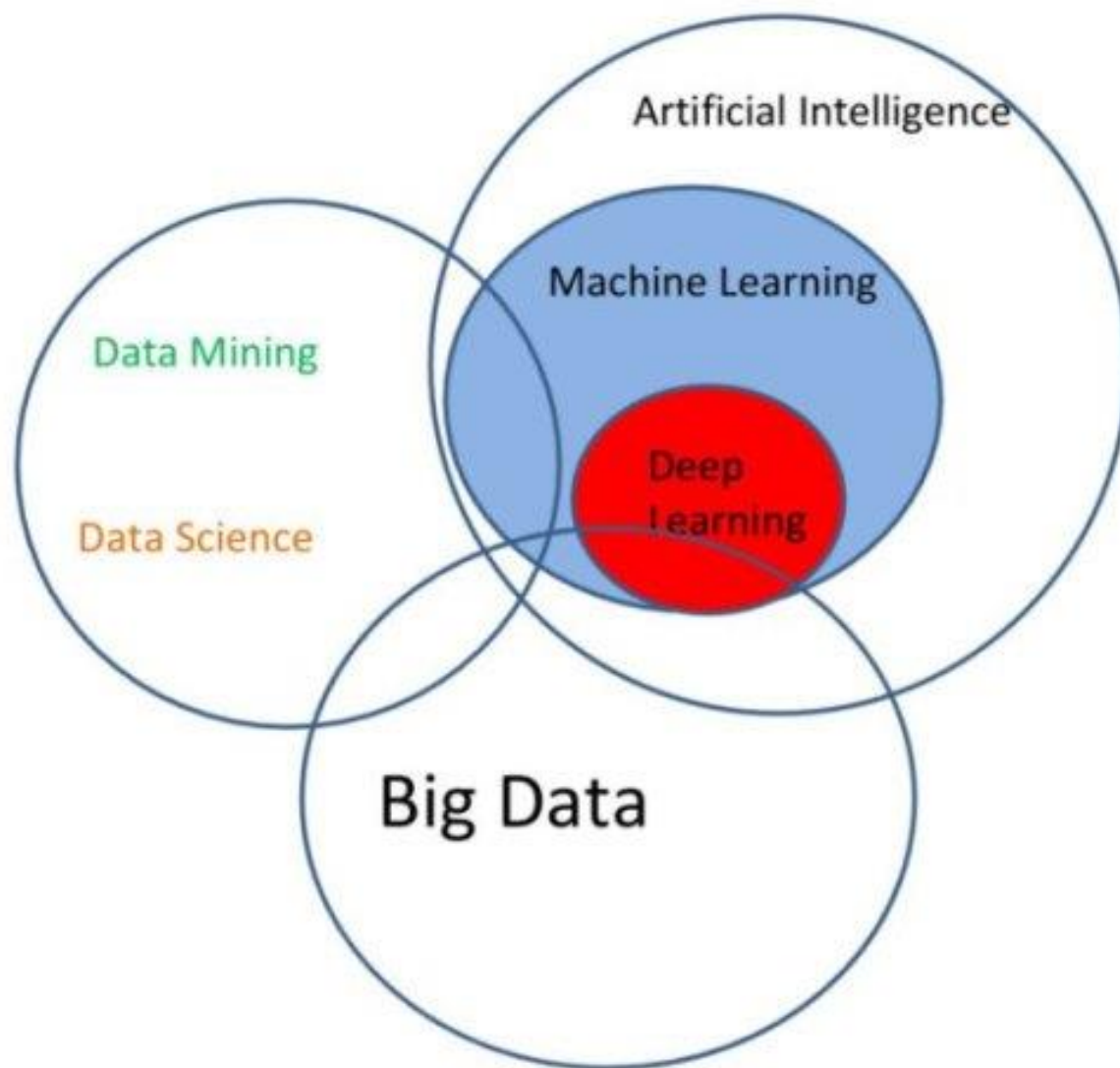


# 人工智慧 vs 機器學習

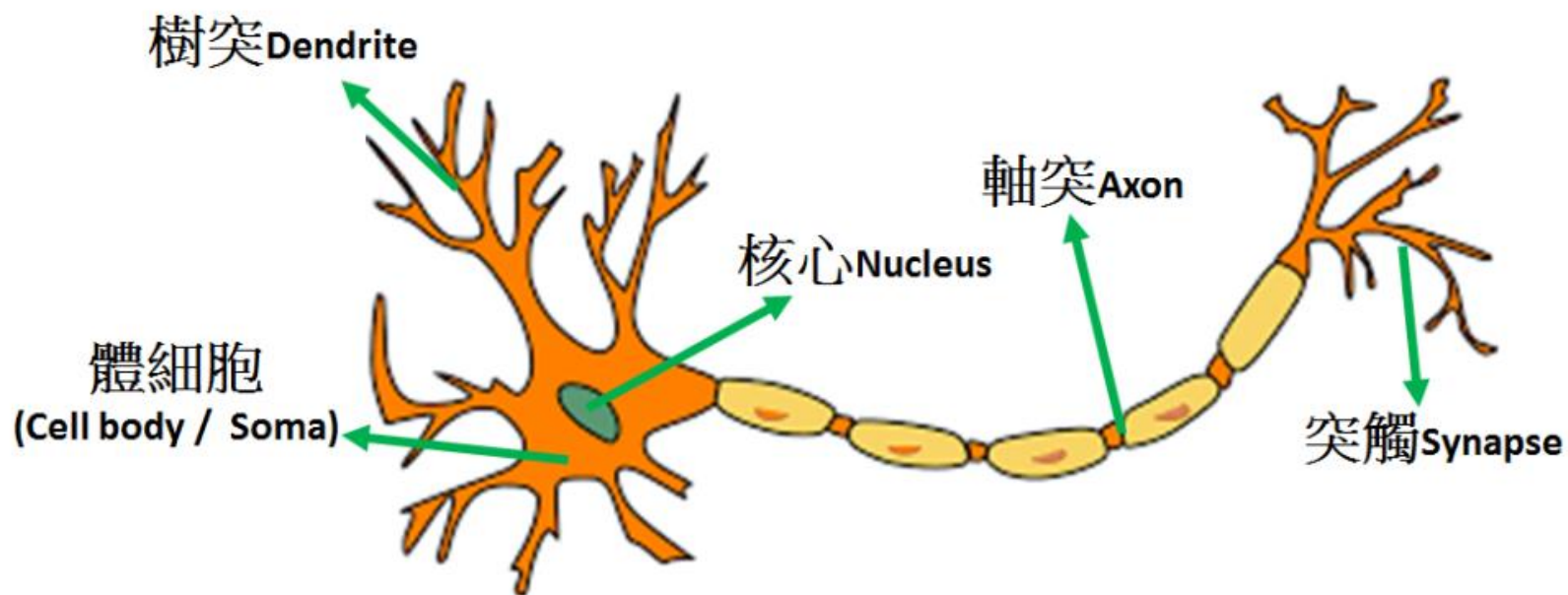


Since an early flush of optimism in the 1950s, smaller subsets of artificial intelligence – first machine learning, then deep learning, a subset of machine learning – have created ever larger disruptions.

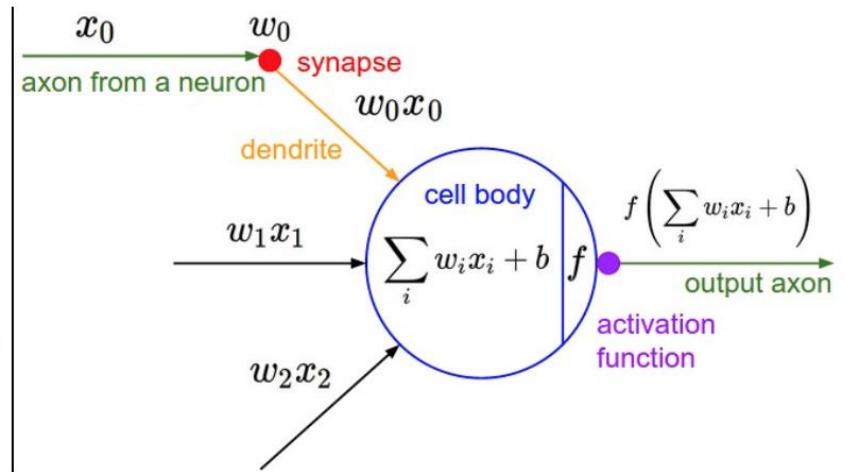
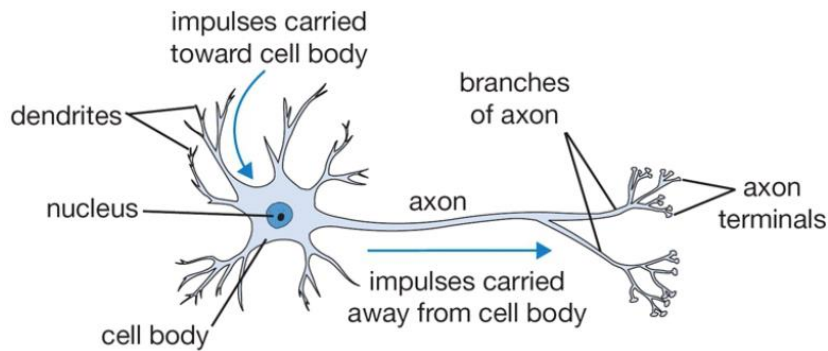
# 人工智慧與其他科學的關係



# 神經元

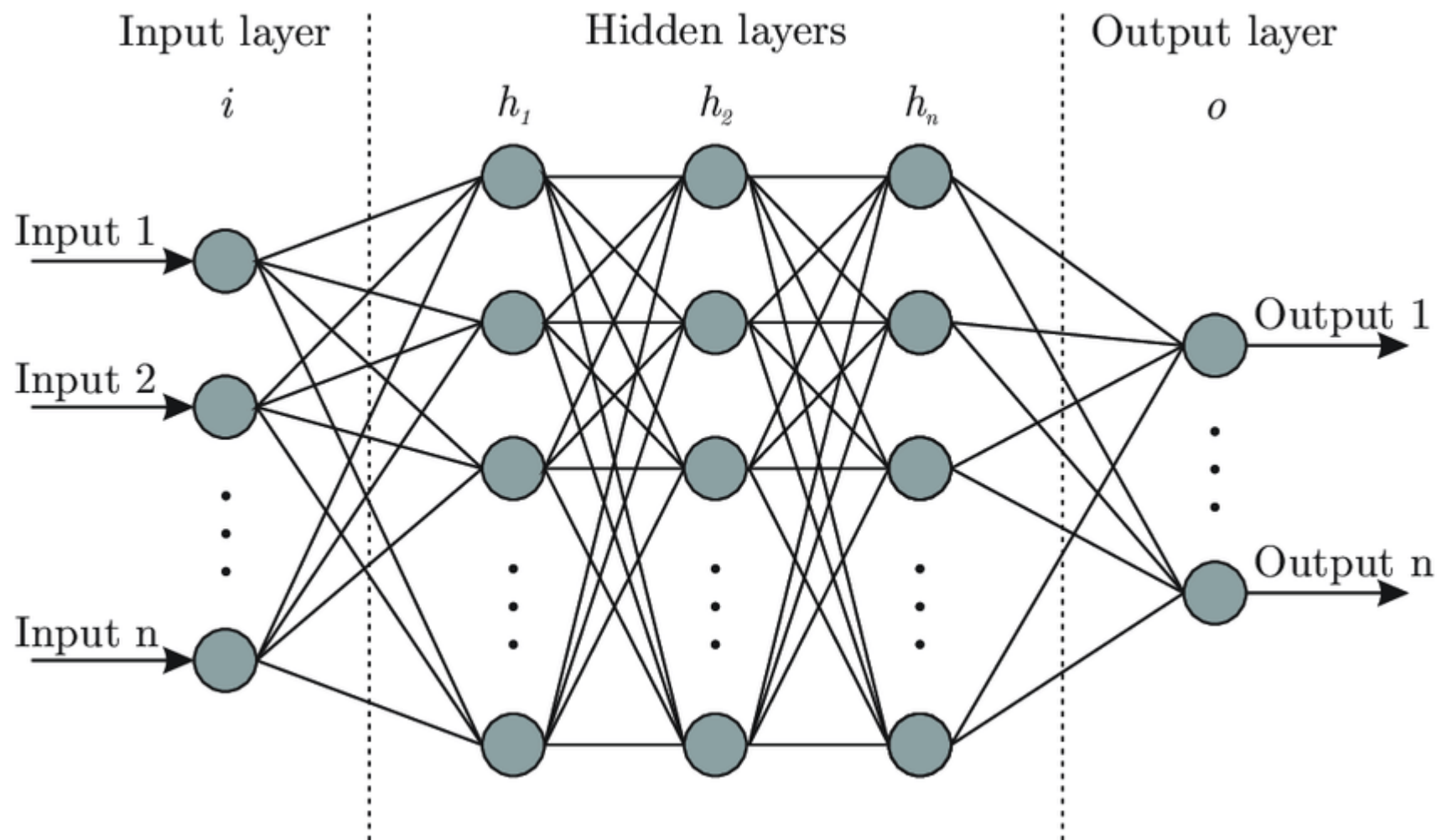


# 神經元模型



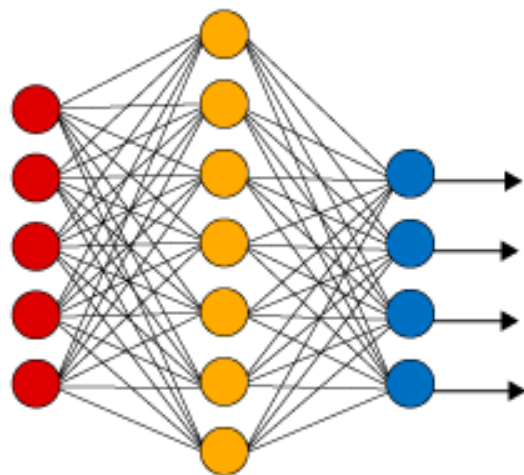
A cartoon drawing of a biological neuron (left) and its mathematical model (right).

# 類神經網路－機器學習

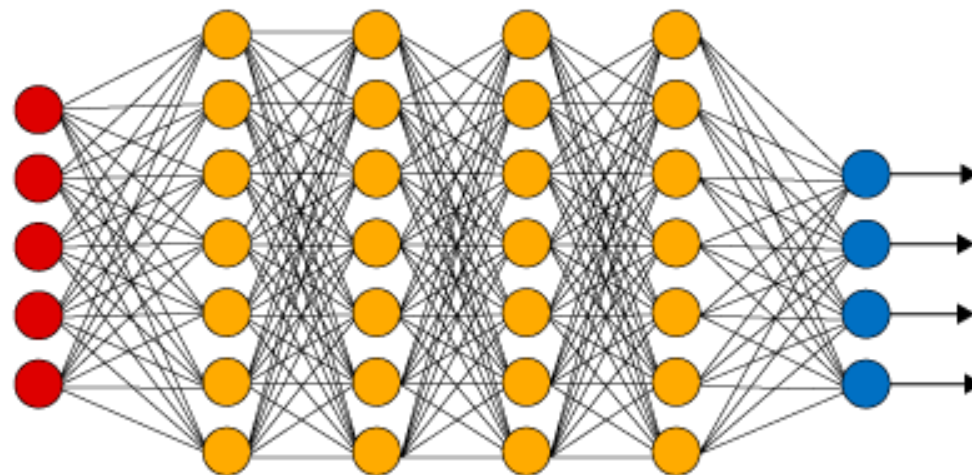


# 深度學習-1

Simple Neural Network



Deep Learning Neural Network



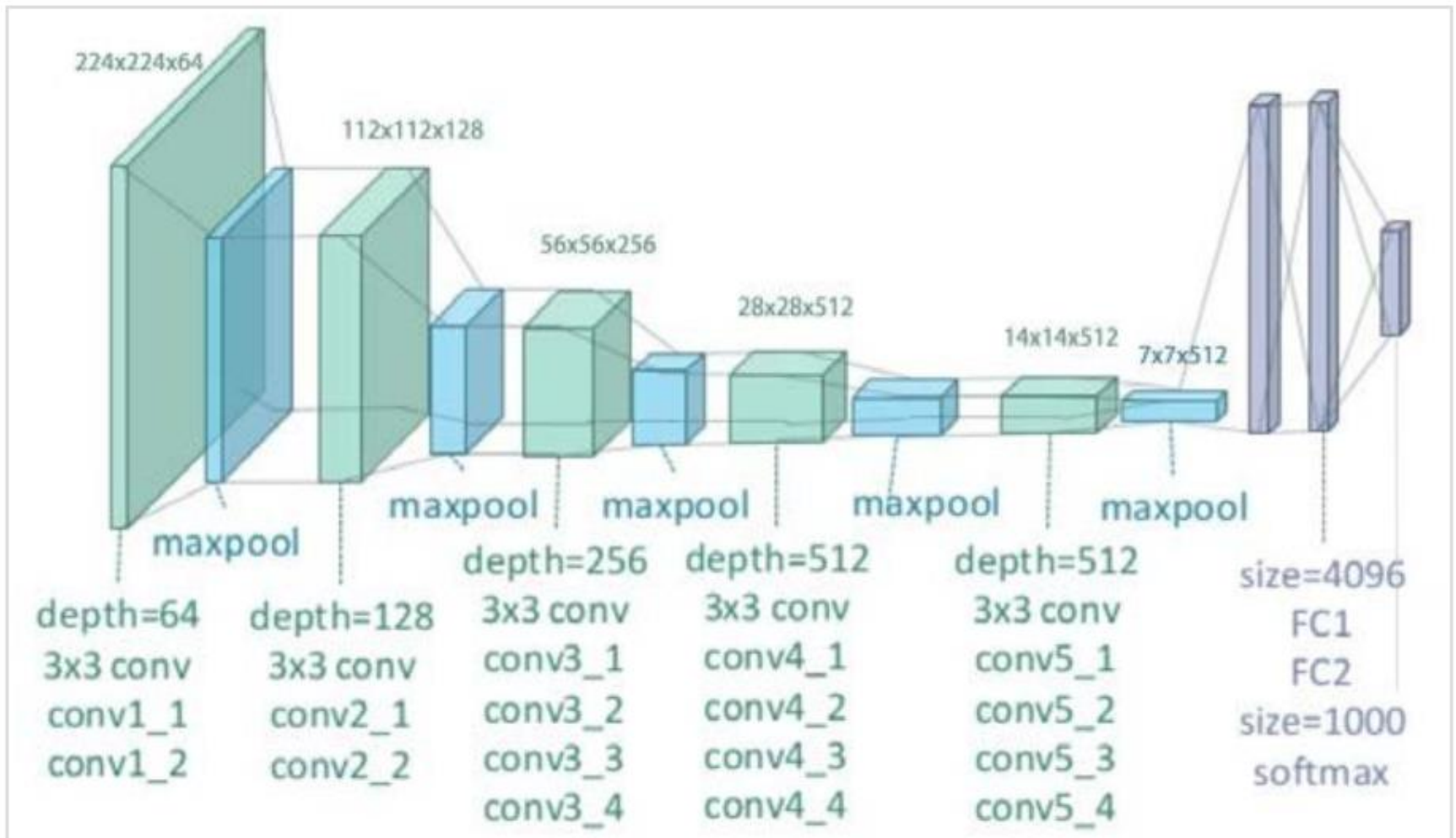
● Input Layer

● Hidden Layer

● Output Layer



# 深度學習-2



# 深度學習應用



# 深度學習應用體驗

圖像分類

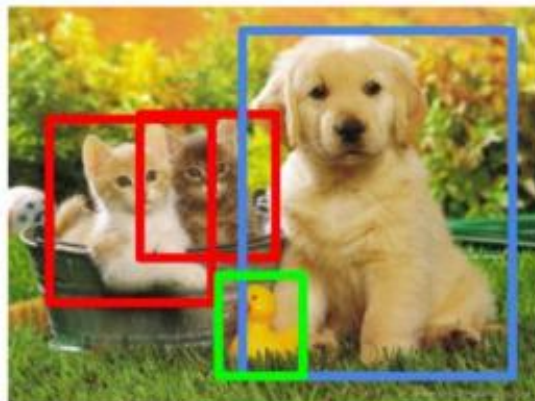
**Classification**



CAT

物件偵測

**Object Detection**



CAT, DOG, DUCK

圖像分割

**Instance Segmentation**

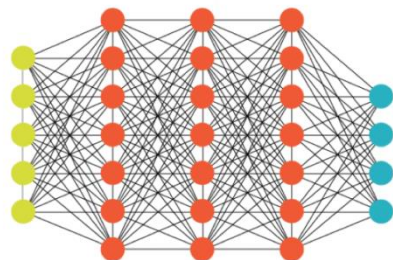


CAT, DOG, DUCK

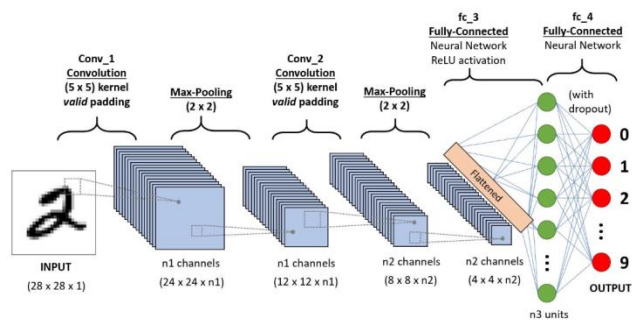
物件偵測2

# 深度學習實作

手寫數字  
機器學習



手寫數字  
深度學習



轉移學習

