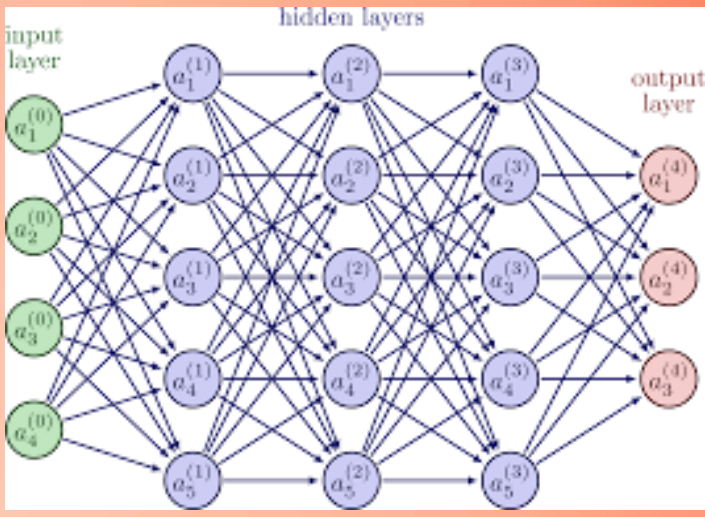
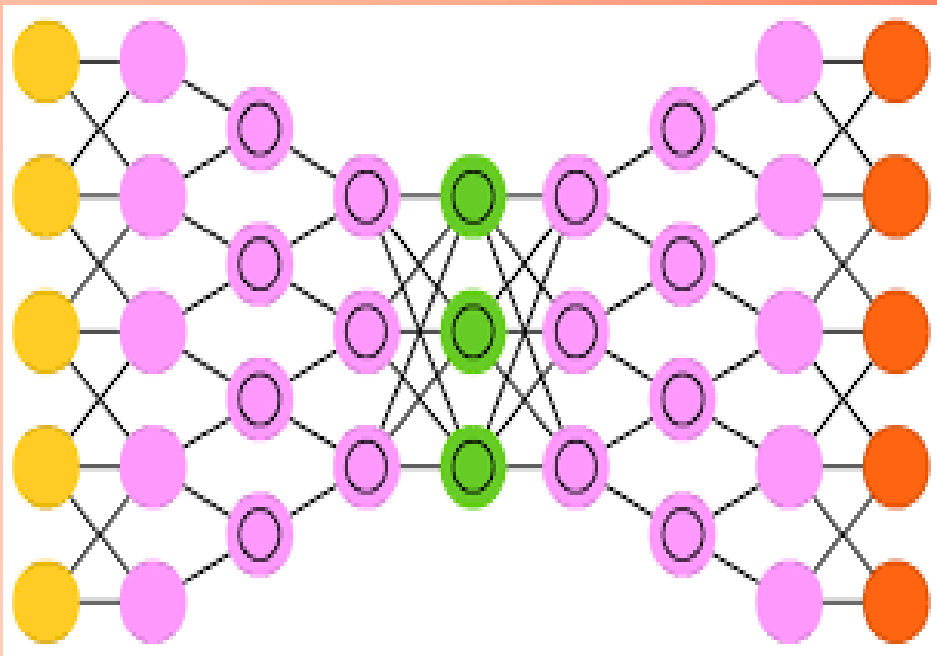
Convolutional Neural Network

By Judith Barrios



What is a Neural Network?

- A neural network is like a computer brain
- It learns by finding patterns in data
- It has layers of connected “neurons” that process information



Welcome to the Neural Network Zoo

- In the Neural Network Zoo, each type of neural network is symbolized by an animal that reflects its unique traits, strengths, and behaviors
- Our team selected the Cheetah to represent the Convolutional Neural Network (CNN)
- The cheetah is know for it’s incredible speed, much like how CNNs process data quickly and efficiently
- It also has sharp vision and intense focus, symbolizing how CNNs excel at analyzing and recognizing patterns in visual data, such as images and videos
- This makes the CNN cheetah a perfect representation of a network that fast, focused, and image-savvy.

What is a Convolutional Neural Network

- CNNs are like cheetahs: fast, focused, and great with images
- They look for patterns in pictures and videos
- They use special layers to zoom in on details like edges, shapes, and objects

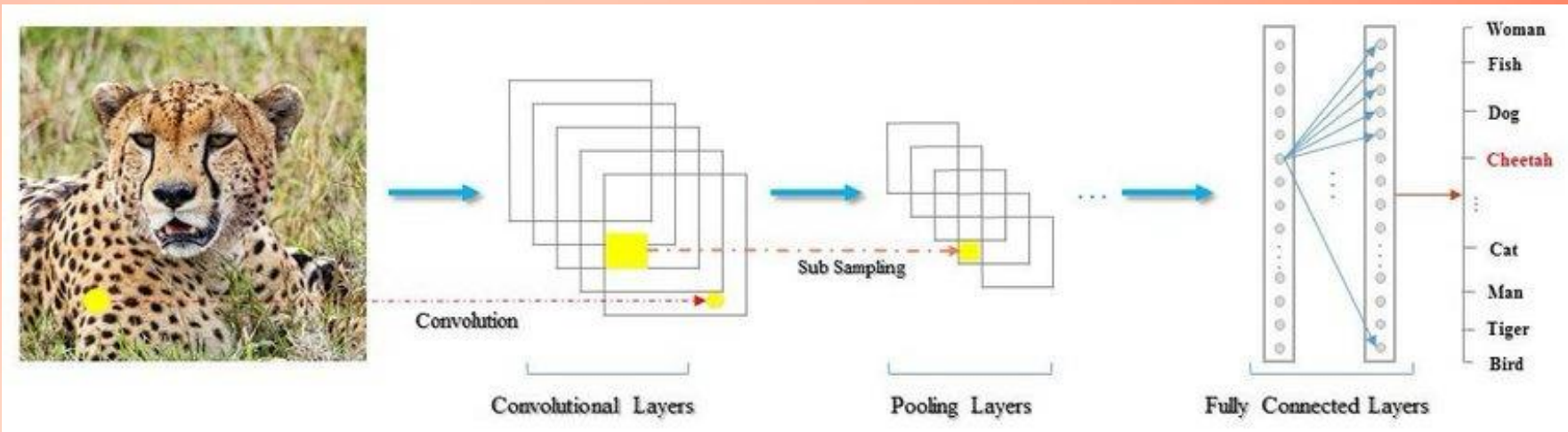
How CNN Works

- Input Layer: Image goes in
- Convolutional Layer: Looks at small parts of the image
- Activation Layer (ReLU): Keeps important features
- Pooling Layer: Shrinks image to speed things up
- Fully Connected Layer: Makes a prediction (like “cat” or “dog”)

Why CNNs are useful

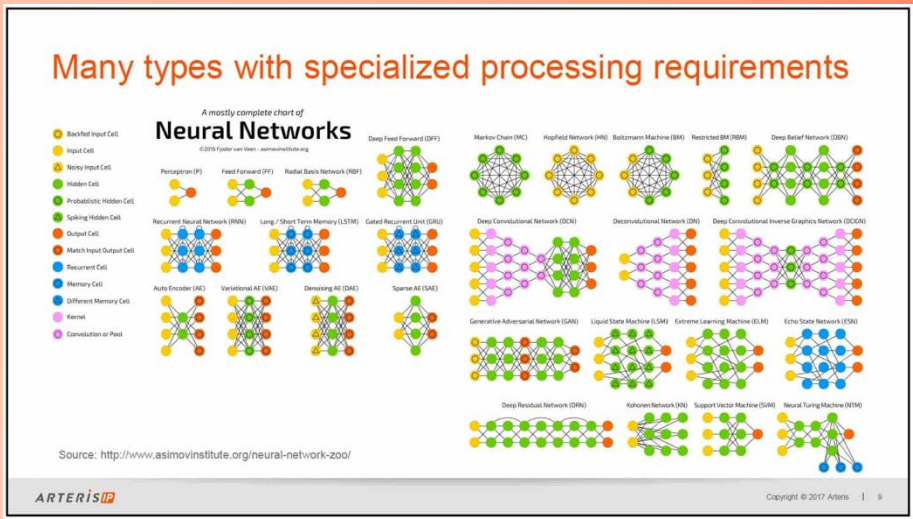
Used in:

- Face recognition
- Self driving cars
- Medical image analysis
- Object detection



Why we Chose the Cheetahs

- Cheetahs are super fast, like the CNNs analyzing thousands of images quickly
- They focus their vision, like CNNs focusing on image features
- Agile and accurate, just like CNNs in real time applications



Summary

- CNN = Cheetah of the Zoo
- Fast, focused, image expert
- One of the smartest tools for computer vision