Intro to Neural Network

THEORY

1) A neural network is a series of algorithms that endeavors to recognize underlying relationships in a set of data through a process that mimics the way the human brain operates.
2) Neural networks with several process layers are known as ”deep” networks and are used for deep learning algorithms.
3) Feed-forward neural networks are one of the more simple types of neural networks. It conveys information in one direction through input nodes; this information continues to be processed in this single direction until it reaches the output mode.
4) A more complex type of neural network, recurrent neural networks take the output of a processing node and transmit the information back into the network. This results in theoretical ”learning” and improvement of the network.
5) Convolutional neural networks, also called ConvNets or CNNs, have several layers in which data is sorted into categories. These networks have an input layer, an output layer, and a hidden multitude of convolutional layers in between. The layers create feature maps that record areas of an image that are broken down further until they generate valuable outputs.

QUIZ

1) Name any 2 convolutional neural network architectures?
2) What is ResNet?

ANSWER

1) AlexNet & GoogLeNet
2) Residual Network (ResNet) is a Convolutional Neural Network (CNN) architecture that overcame the “vanishing gradient” problem, making it possible to construct networks with up to thousands of convolutional layers, which outperform shallower networks.