## The description of each layer

### FullyConnected layer:
A fully connected layer, also known as a dense layer, is a type of layer in a neural network where each neuron is connected to every neuron in the previous layer. It is typically used towards the end of the network to aggregate the features learned by previous layers and perform the final classification or regression.
**Input:** The input to a fully connected layer is a vector of features, which could be the output of a previous layer such as a convolutional or pooling layer.
**Output:** The output is also a vector where each element is computed as a weighted sum of all inputs, followed by an optional activation function.
**OutputSize parameter:** The OutputSize parameter specifies the number of neurons in the fully connected layer. It directly determines the dimensionality of the output vector. Adjusting OutputSize changes the number of features that the layer will produce, which can affect the model's capacity and performance.

### Softmax layer:
The softmax layer is used in the final layer of a classification neural network to convert the raw prediction scores into probabilities. It applies the softmax function to the input vector, which scales the input values so that the output vector sums to 1, with each element representing the probability of each class.
**Input:** The input to a softmax layer is a vector of raw scores (logits) from the previous layer.
**Output:** The output is a vector of probabilities, where each element represents the likelihood of the corresponding class.

### Classouput layer (Classification Layer):
The classification layer is used to compute the loss for classification problems and is usually the final layer in a classification network. It typically includes the softmax operation and the computation of the loss function, such as cross-entropy loss.
**Input:** The input to a classification layer is the probability vector from the softmax layer.
**Output:** The output is the loss value that is used to train the network.