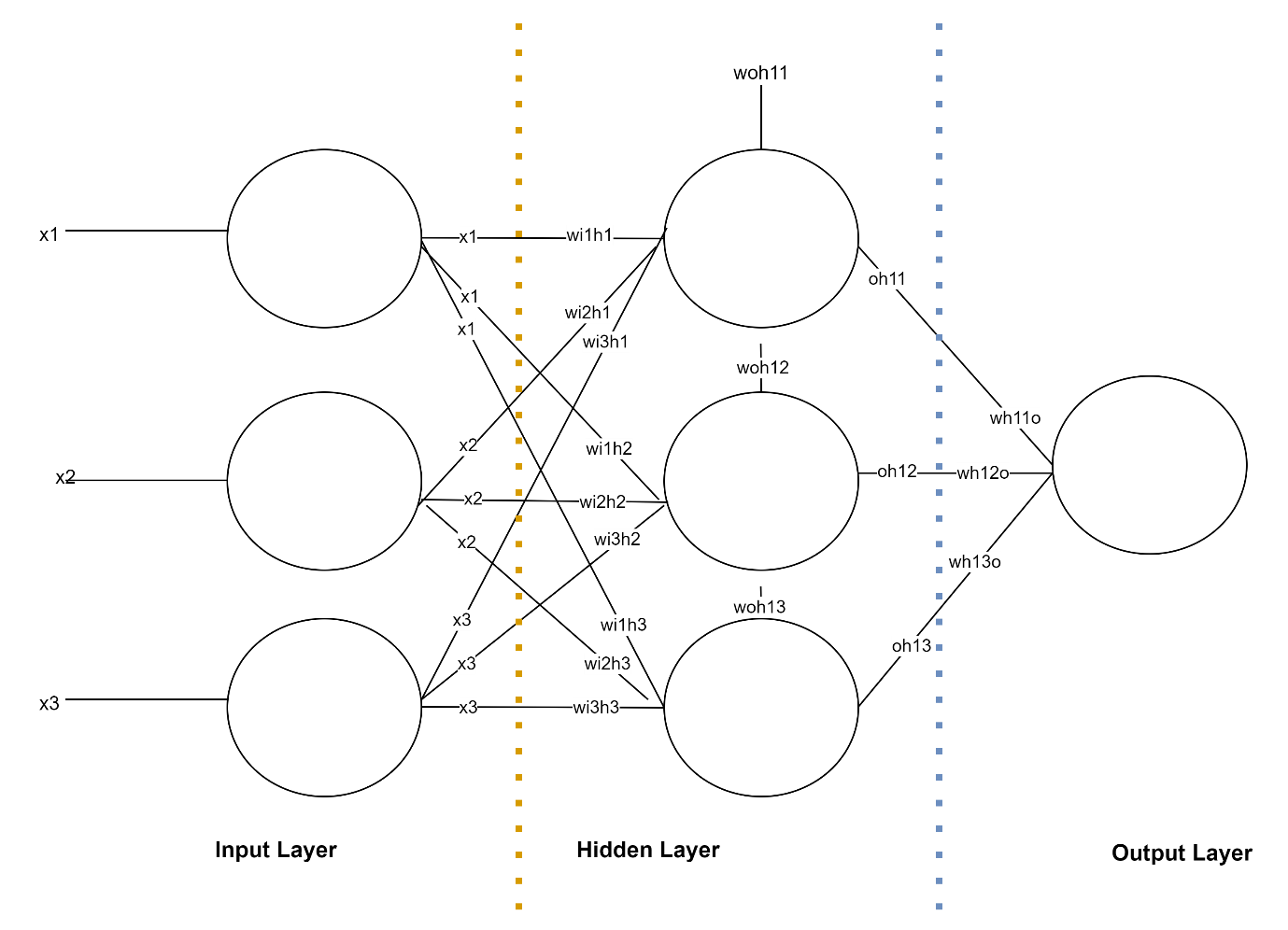
We have different types of Networks available

Standard Network



Inputs= 10 Neurons

Hidden layer =10 Neurons

Output layer=10 Neurons

How many total parameters to be trained?

10\*10+10 and 10\*10+10 total 110+110= 220

|  |  |
| --- | --- |
| Layer | Params |
| Input layer | 0 |
| Hidden layer | 10\*10+10=110 |
| Output layer | 10\*10+10=110 |
| Total | 220 |

Inputs= 28 Neurons

Hidden layer =100 Neurons

Output layer=10 Neurons

How many total parameters to be trained?

|  |  |
| --- | --- |
| Layer | Params |
| Input layer | 0 |
| Hidden layer | 28\*100+100=2900 |
| Output layer | 100\*10+10=1010 |
| Total | 3910 |

Input = 28x28 Image ========== Number of neuron 28x28=784 pixels

Hidden layer= 128

Hidden layer

Output layer =10

|  |  |
| --- | --- |
| Layer | Params |
| Input layer | 0 |
| Hidden layer | 784\*128+128=100480 |
| Output layer | 128\*10+10=1290 |
| Total | 101770 |

Every one able to write the weights and Bias

Math equations

Important questions

1. How to choose weights
2. How to choose activation function
3. How to choose hidden layers

Model will be overfit

How to avoid overfit

1. How to choose hidden layer Neurons

More parameters to train

More time is required

How can I optimise that

1. How to Choose weights:

ANN: Artificial Neural Network : Perceptron

DNN: Deep neural Network : Multi layer Perceptron

