

### Example1.py

```
from DeepLearningTools import DeepLearning
```

```
model= DeepLearning()
```

```
model.Add_Layer(5, "Relu")
```

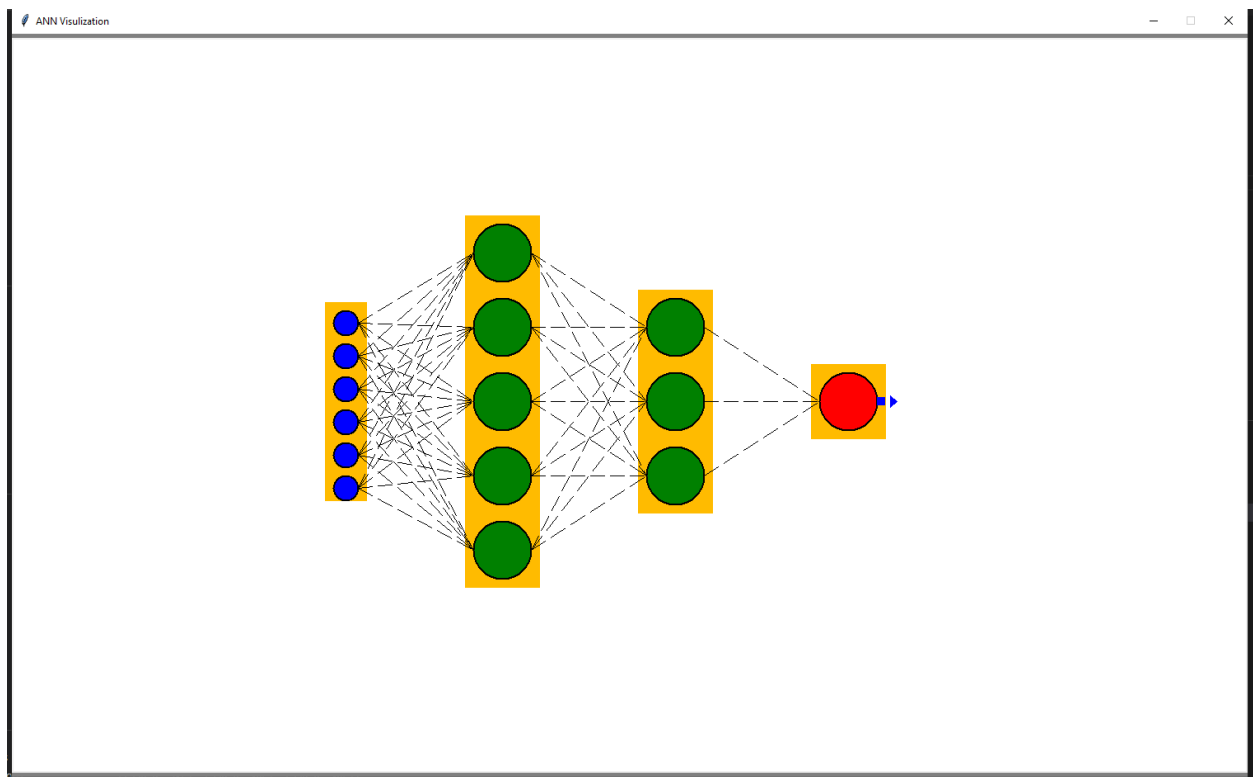
```
model.Add_Layer(3, "Relu")
```

```
model.Add_Layer(1, "Sigmoid", Threshold_Value=0.5)
```

```
Sample_Data=[200,100,121,88,77,99]
```

```
model.compile(Inputs=len(Sample_Data), Random_Values=[[-1,1],[-5, 5]])
```

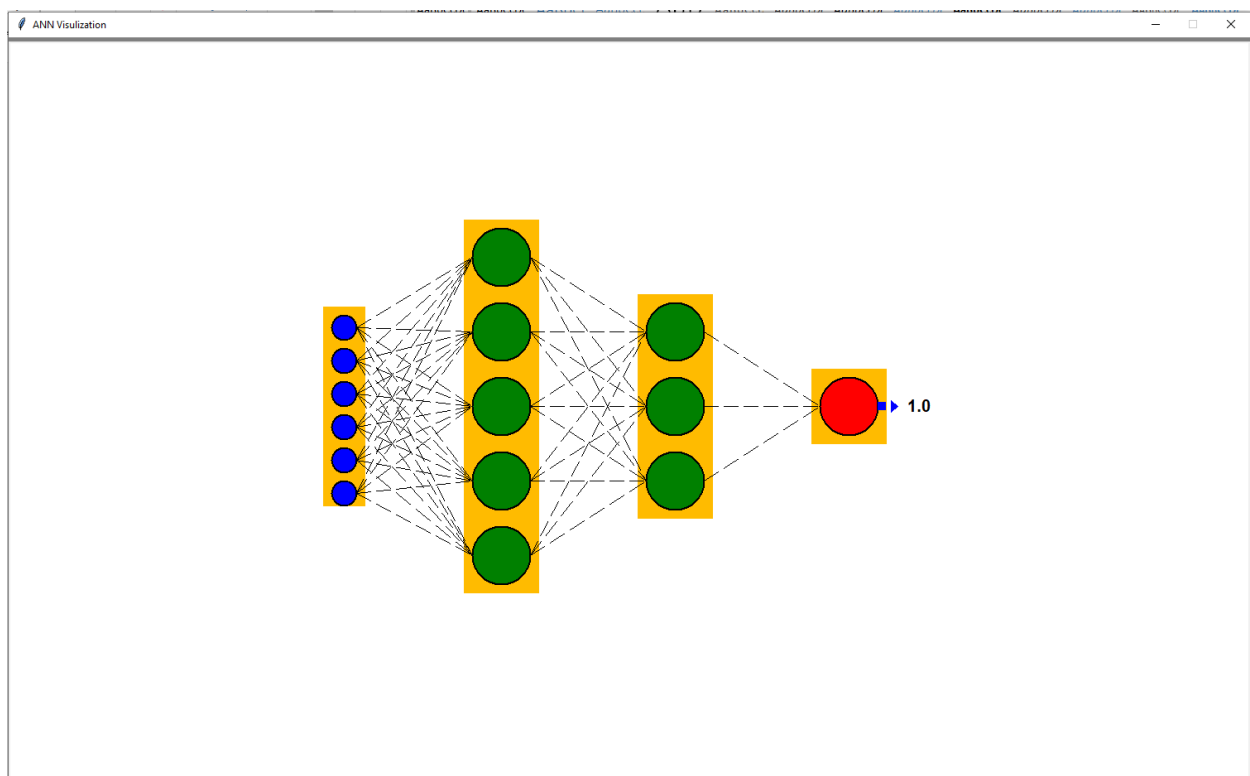
```
model.ANNToolBox(Action="draw", Digram_Title="ANN Visulization")
```



## Example2.py

```
from DeepLearningTools import DeepLearning

model= DeepLearning()
model.Add_Layer(5, "Relu")
model.Add_Layer(3, "Relu")
model.Add_Layer(1, "Sigmoid", Threshold_Value=0.5)
Sample_Data=[200,100,121,88,77,99]
model.compile(Inputs=len(Sample_Data), Random_Values=[[0,1],[-2, 2]])
model.ANNToolBox(Action="predict", Sample_Data=Sample_Data, Digram_Title="ANN
Visulization")
```



### Example3.py "Generate JSON ANN structure"

```
from DeepLearningTools import DeepLearning

model= DeepLearning()

model.Add_Layer(6, "Relu")

model.Add_Layer(2, "Relu")

model.Add_Layer(2, "Sigmoid", Threshold_Value=0.5)

Sample_Data=[200,100,121,88,77,99]

model.compile(Inputs=len(Sample_Data), Random_Values=[0,1])

model.Create_JSON_Structure("ANN.json")
```

### ANN.json

```
{
  "1": [
    "ReLU",
    "None",
    [
      [
        0.7484702757557216,
        0.18487668609445795
      ],
      [
        0.47953349413077373,
        0.8536287023515025
      ],
      [
        0.13522415704990554,
        0.8913260631670491
      ],
      [
        0.6436862848578222,
        0.5619039712329927
      ],
      [
        0.9454535614478953,
        0.6622829283874505
      ],
      [

```

```
        0.9102701911488829,  
        0.10672184940383123  
    ]  
],  
[  
    -2.6258085797267894,  
    -3.902635779698736,  
    -2.962337241375261,  
    -2.836375616612674,  
    -1.3227471513219378,  
    1.4730720554602428  
]  
],  
"2": [  
    "ReLU",  
    "None",  
    [  
        [  
            0.7935602209635124,  
            0.8572257852892311  
        ],  
        [  
            0.5484779151979818,  
            0.9903735330706281  
        ]  
    ],  
    [  
        -7.232697167531878,  
        2.4764227672219974  
    ]  
],  
"3": [  
    "Sigmoid",  
    0.5,  
    [  
        [  
            0  
        ],  
        [  
            0  
        ]  
    ],  
    [  
        9.62002991563011,  
        -7.988535364442891
```

```
]
],
"0": [
  "None",
  "None",
  [
    [
      0.4922084203300747,
      0.33203889025190936,
      0.29017126914671787,
      0.18292406655700222,
      0.6807286671180115,
      0.3616151884057399
    ],
    [
      0.5173735106409296,
      0.3823541406694406,
      0.11110718589478252,
      0.7891945097428881,
      0.4876209403485722,
      0.6716069383504113
    ],
    [
      0.6535084632570177,
      0.9429662483489015,
      0.44415387404244244,
      0.8001894845389295,
      0.009865255381700022,
      0.8380499493688451
    ],
    [
      0.44571822402973194,
      0.031144582905501483,
      0.21564630257751816,
      0.8911516447334575,
      0.8818275480747938,
      0.43217200980131876
    ],
    [
      0.516904375249317,
      0.25323138037179627,
      0.5480933533935657,
      0.43895249389689484,
      0.6243867747000033,
      0.8290778280536841
    ]
  ]
],
```

```
    ],  
    [  
        0.28173923881049856,  
        0.08359421905861586,  
        0.4555912247113537,  
        0.4655190570785135,  
        0.5435225099426793,  
        0.06707821457805585  
    ]  
]  
}
```

### Example4.py : Create ANN structure from json file "Load ANN.JSON"

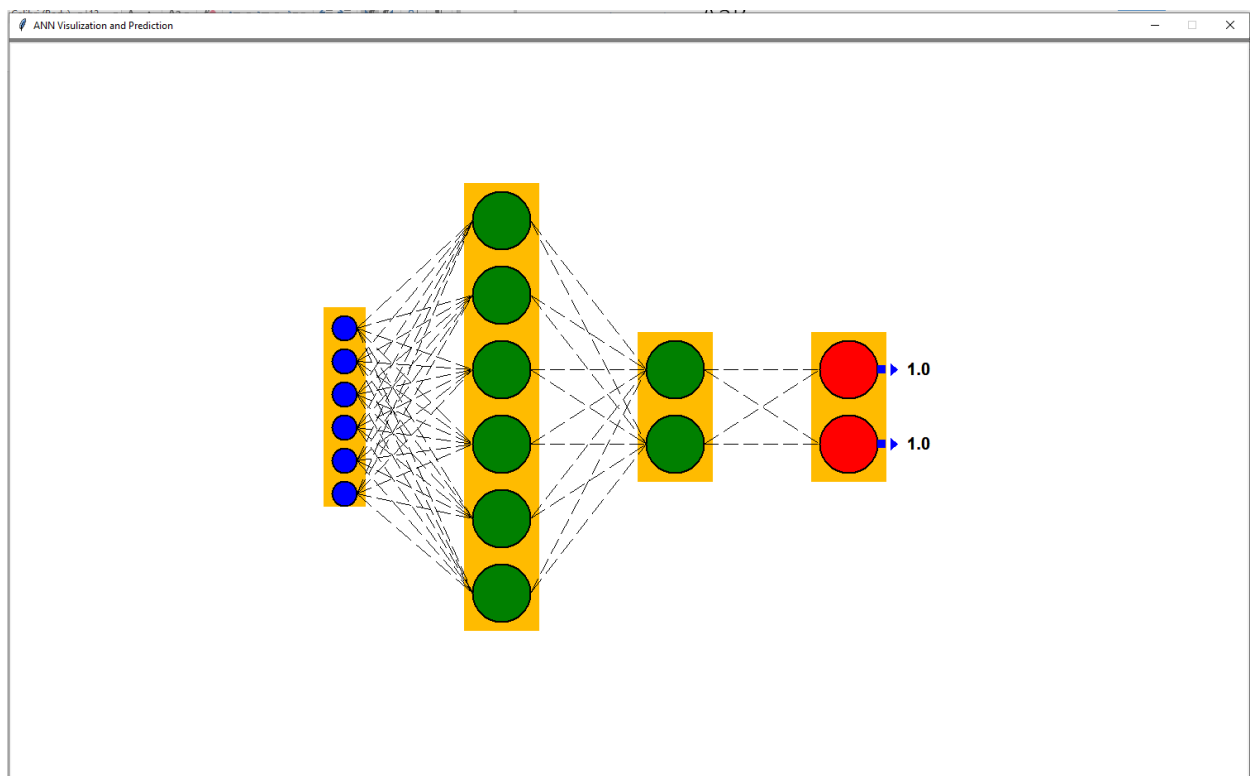
```
from DeepLearningTools import DeepLearning
```

```
model= DeepLearning()
```

```
Sample_Data=[200,100,121,88,77,99]
```

```
model.compile("ANN.json")
```

```
model.ANNToolBox(Action="predict", Sample_Data=Sample_Data, Digram_Title="ANN  
Visulization and Prediction")
```



### Example5.py “Big ANN Structure”

```
from DeepLearningTools import DeepLearning
```

```
model=DeepLearning()
```

```
model.Add_Layer(5, "relu")
```

```
model.Add_Layer(6, "relu")
```

```
model.Add_Layer(5, "softmax")
```

```
Sample_Data=[3,2, 5]
```

```
model.compile(Inputs=len(Sample_Data), Random_Values=[[-1,1],[-5, 5]])
```

```
model.ANNToolBox(Action="predict", Sample_Data=Sample_Data, Digram_Title="ANN Visulization")
```

