**Task Sheet:** Use this task sheet to perform Section-B: Neural Net’s Exercise and **Paste** this table filled with your responses before the questions of Neural Nets segment.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Topologies** | **Sigmoid Function** | | | | | | **Relu Function** | | | | | |
|  | Training Accuracy | | | Testing Accuracy | | | Training Accuracy | | | Testing Accuracy | | |
| **[256,96,32,10]** | 53.95% | | | 65.02% | | | 96.86% | | | 96.78% | | |
| **[96,32,10]** | 90.16% | | | 90.96% | | | 96.36% | | | 96.35% | | |
| **[128,64,32,10]** | 54.92% | | | 66.45% | | | 96.53% | | | 96.73% | | |
| **Best Topology Selected** | **[256,96,32,10] - Relu** | | | | | | | | | | | |
| **Learning Rate** | **0.1** | | | **0.01** | | | **0.001** | | | **0.0001** | | |
|  | Training Accuracy | Testing Accuracy | | Training Accuracy | | Testing Accuracy | Training Accuracy | Testing Accuracy | | Training Accuracy | | Testing Accuracy |
|  | 96.86% | 96.78% | | 89.49% | | 90.25% | 25.06% | 27.49% | | 7.99% | | 8.05% |
| **Best Learning Rate Selected** | **[256,96,32,10] – Relu – 0.1** | | | | | | | | | | | |
| **Batch Size** | **128** | | | | **64** | | | | **32** | | | |
|  | Training Accuracy | | Testing Accuracy | | Training Accuracy | | Testing Accuracy | | Training Accuracy | | Testing Accuracy | |
|  | 96.86% | | 96.78% | | 97.42% | | 97.34% | | 97.44% | | 96.86% | |
| **Best Batch Size Selected** | **[256,96,32,10] – Relu – 0.1 - 64** | | | | | | | | | | | |
| **Overall Best Model Performance** | **Overall Best Model Training Accuracy** | | | | | | **Overall Best Model Testing Accuracy** | | | | | |
|  | 97.42% | | | | | | 97.34% | | | | | |