**HW1 – Feed Forward Network**

Classify "3" \ "8" :

Training Set Accuracy: 99.691%

Test Set accuracy: 98.387%

|  |  |
| --- | --- |
| **Iteration Number** | **Cost Value** |
| 100 | 0.15679 |
| 200 | 0.120944 |
| 300 | **D:\Nir F Thesis\Deep learning\assi 1\DeepLearningHW1\DeepLearningHW1\cost function 3_8.png**0.108429 |
| 400 | 0.100218 |
| 500 | 0.093744 |
| 600 | 0.088189 |
| 700 | 0.082991 |
| 800 | 0.077872 |
| 900 | 0.07295 |
| 1000 | 0.068022 |
| 1100 | 0.063151 |
| 1200 | 0.058569 |
| 1300 | 0.054379 |
| 1400 | 0.05056 |
| 1500 | 0.046976 |
| 1600 | 0.043727 |
| 1700 | 0.040692 |
| 1800 | 0.037892 |
| 1900 | 0.035319 |
| 2000 | 0.032928 |
| 2100 | 0.030701 |
| 2200 | 0.028581 |
| 2300 | 0.0265 |
| 2400 | 0.024504 |
| 2500 | 0.022588 |
| 2600 | 0.020936 |
| 2700 | 0.019336 |
| 2800 | 0.017771 |
| 2900 | 0.016445 |
| 3000 | 0.015217 |

Classify "7" \ "9" :

Training Set Accuracy: 99.828%

Test Set accuracy: 98.429%

|  |  |
| --- | --- |
| **Iteration Number** | **Cost Value** |
| 100 | **D:\Nir F Thesis\Deep learning\assi 1\DeepLearningHW1\DeepLearningHW1\cost function 7_9.png**0.192519 |
| 200 | 0.143389 |
| 300 | 0.122123 |
| 400 | 0.101442 |
| 500 | 0.083901 |
| 600 | 0.070618 |
| 700 | 0.060426 |
| 800 | 0.052647 |
| 900 | 0.046643 |
| 1000 | 0.041817 |
| 1100 | 0.037795 |
| 1200 | 0.034303 |
| 1300 | 0.031229 |
| 1400 | 0.028579 |
| 1500 | 0.026319 |
| 1600 | 0.024295 |
| 1700 | 0.022415 |
| 1800 | 0.020727 |
| 1900 | 0.019229 |
| 2000 | 0.017872 |
| 2100 | 0.016641 |
| 2200 | 0.015446 |
| 2300 | 0.014324 |
| 2400 | 0.013375 |
| 2500 | 0.012434 |
| 2600 | 0.011593 |
| 2700 | 0.010801 |
| 2800 | 0.009954 |
| 2900 | 0.009116 |
| 3000 | 0.008244 |