Decision Tree

Baseline results:

Confusion matrix:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Predicted Labels | | | | | | | | | | | |
| Real Labels |  | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **0** | 137 | 1 | 5 | 3 | 3 | 5 | 2 | 0 | 2 | 4 |
| **1** | 0 | 157 | 6 | 1 | 3 | 2 | 3 | 7 | 2 | 0 |
| **2** | 6 | 4 | 111 | 8 | 2 | 6 | 7 | 5 | 4 | 5 |
| **3** | 2 | 3 | 10 | 115 | 2 | 13 | 4 | 1 | 10 | 6 |
| **4** | 0 | 0 | 4 | 3 | 127 | 1 | 2 | 2 | 8 | 15 |
| **5** | 3 | 1 | 4 | 12 | 4 | 100 | 7 | 1 | 4 | 5 |
| **6** | 1 | 0 | 10 | 1 | 7 | 4 | 131 | 0 | 7 | 4 |
| **7** | 0 | 1 | 5 | 1 | 4 | 1 | 0 | 152 | 1 | 6 |
| **8** | 3 | 2 | 5 | 9 | 7 | 3 | 4 | 8 | 96 | 13 |
| **9** | 2 | 0 | 2 | 3 | 8 | 6 | 3 | 8 | 1 | 127 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Label** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **Precision** | 0.8896 | 0.9289 | 0.6851 | 0.7371 | 0.7604 | 0.7092 | 0.8036 | 0.8260 | 0.7111 | 0.6864 |
| **Recall** | 0.8456 | 0.8674 | 0.7025 | 0.6927 | 0.7839 | 0.7092 | 0.7939 | 0.8888 | 0.64 | 0.7937 |