**Supervised and Unsupervised Learning**

**Document Classification**

**RMDL model**

**Results**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Random Deep** | | | **Epochs** | | | **Min Hidden Layers** | | | **Max Hidden**  **Layers** | | | **Min Nodes** | | | **Max Nodes** | | | **ACC**  **avg** |
| ***DNN*** | ***RNN*** | ***CNN*** | ***DNN*** | ***RNN*** | ***CNN*** | ***DNN*** | ***RNN*** | ***CNN*** | ***DNN*** | ***RNN*** | ***CNN*** | ***DNN*** | ***RNN*** | ***CNN*** | ***DNN*** | ***RNN*** | ***CNN*** |
| 3 | 3 | 3 | 20 | 10 | 10 | 1 | 3 | 3 | 20 | 10 | 10 | 200 | 200 | 200 | 1024 | 300 | 300 | 0.75 |
| 3 | 2 | 2 | 20 | 10 | 10 | 4 | 3 | 3 | 9 | 5 | 5 | 200 | 200 | 200 | 1024 | 300 | 300 | 0.76 |
| 3 | 3 | 3 | 20 | 10 | 10 | 1 | 3 | 3 | 20 | 5 | 5 | 200 | 200 | 200 | 1024 | 800 | 800 | 0.77 |
| 3 | 1 | 1 | 15 | 8 | 8 | 1 | 2 | 2 | 10 | 5 | 5 | 200 | 200 | 200 | 1024 | 300 | 300 | 0.69 |

**SVM model**

**Results**

|  |  |
| --- | --- |
| **Kernel** | **Accuracy** |
| Linear | 0.73 |
| Sigmoid | 0.25 |
| Polynomial with degree 3 | 0.25 |
| Rbf | 0.25 |

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