

Summary Report (Digits)

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A. Classification Report

1. Decision Tree

	precision	recall	f1-score	support
0	0.91	0.94	0.92	32
1	0.93	0.72	0.81	36
2	0.96	0.73	0.83	30
3	0.74	0.83	0.78	41
4	0.80	0.88	0.84	32
5	0.90	0.93	0.91	46
6	0.93	0.88	0.90	32
7	0.90	0.93	0.91	40
8	0.77	0.81	0.79	42
9	0.69	0.76	0.72	29
accuracy			0.84	360
macro avg	0.85	0.84	0.84	360
weighted avg	0.85	0.84	0.84	360

2. Random Forest

	precision	recall	f1-score	support
0	0.97	0.94	0.95	32
1	0.97	1.00	0.99	36
2	1.00	1.00	1.00	30
3	0.98	0.98	0.98	41
4	0.94	0.97	0.95	32
5	1.00	0.98	0.99	46
6	1.00	0.97	0.98	32
7	0.98	1.00	0.99	40
8	0.93	0.98	0.95	42
9	1.00	0.93	0.96	29
accuracy			0.97	360
macro avg	0.98	0.97	0.97	360
weighted avg	0.98	0.97	0.98	360

3. Support Vector Machine

	precision	recall	f1-score	support
0	1.00	0.97	0.98	32
1	0.95	1.00	0.97	36
2	1.00	1.00	1.00	30
3	1.00	1.00	1.00	41
4	0.97	1.00	0.98	32
5	0.98	1.00	0.99	46
6	1.00	1.00	1.00	32
7	1.00	1.00	1.00	40
8	0.98	0.95	0.96	42
9	1.00	0.93	0.96	29
accuracy			0.99	360
macro avg	0.99	0.99	0.99	360
weighted avg	0.99	0.99	0.99	360

4. Stochastic Gradient Descent

	precision	recall	f1-score	support
0	1.00	1.00	1.00	32
1	0.87	0.94	0.91	36
2	0.97	1.00	0.98	30
3	0.93	1.00	0.96	41
4	1.00	0.97	0.98	32
5	0.98	0.93	0.96	46
6	0.94	1.00	0.97	32
7	0.91	1.00	0.95	40
8	1.00	0.86	0.92	42
9	1.00	0.86	0.93	29
accuracy			0.96	360
macro avg	0.96	0.96	0.96	360
weighted avg	0.96	0.96	0.96	360

5, Logistic Regression

	precision	recall	f1-score	support
0	1.00	1.00	1.00	43
1	0.95	0.95	0.95	42
2	0.98	1.00	0.99	40
3	0.94	0.97	0.96	34
4	1.00	1.00	1.00	37
5	0.79	0.96	0.87	28
6	1.00	0.96	0.98	28
7	0.94	0.97	0.96	33
8	0.92	0.81	0.86	43
9	0.97	0.88	0.92	32
accuracy			0.95	360
macro avg	0.95	0.95	0.95	360
weighted avg	0.95	0.95	0.95	360

B. 평가지표 선정 및 선정 근거

평가지표로 Accuracy를 선정한다.

손글씨 숫자를 맞추는것은 특별히 고려하여야 할 다른 요소가 없기때문에 정확하게 맞추는것이 중요하다.

Accuracy값이 0.99로 가장 높은 Support Vector Machine Classifier의 성능이 가장 우수한것으로 나타났다.