KNN
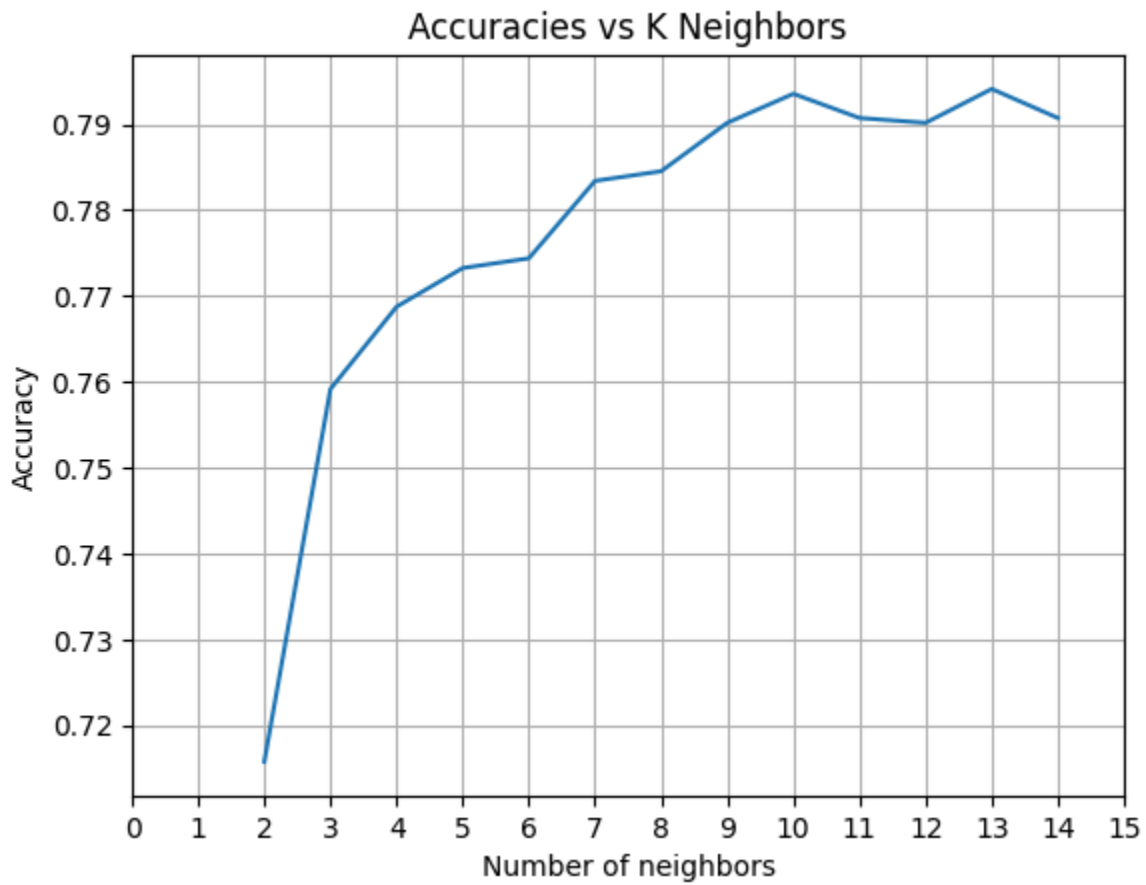
Training Accuracy:

Validation Accuracy:
Accuracy score: 0.7941342357586012
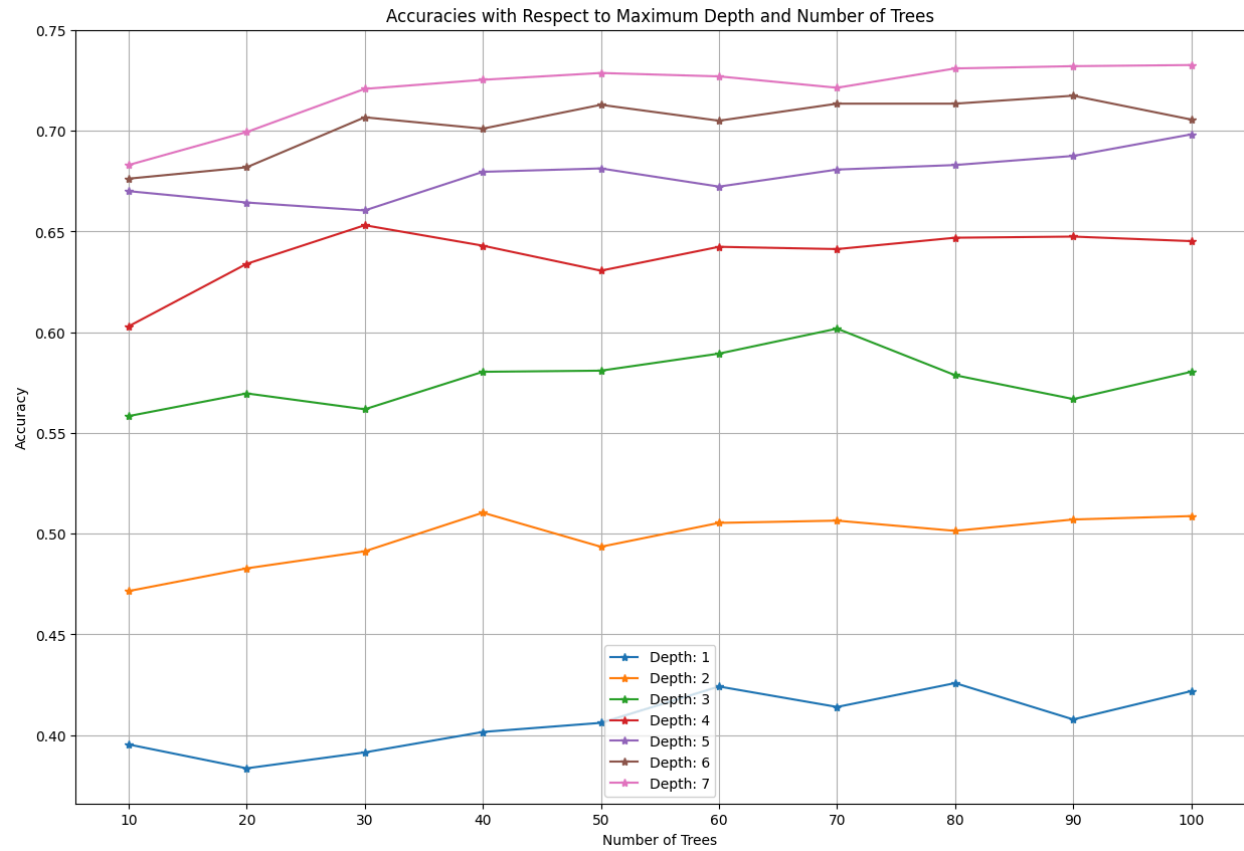
Classification Report: precision   recall   f1-score
support

	precision	recall	f1-score	support
0	0.70	0.65	0.68	216
1	0.73	0.73	0.73	322
2	0.81	0.89	0.85	456
3	0.89	0.75	0.81	123
4	0.92	0.73	0.82	188
5	0.80	0.85	0.82	468
accuracy			0.79	1773
macro avg	0.81	0.77	0.78	1773
weighted avg	0.80	0.79	0.79	1773

Consfuion Matrix
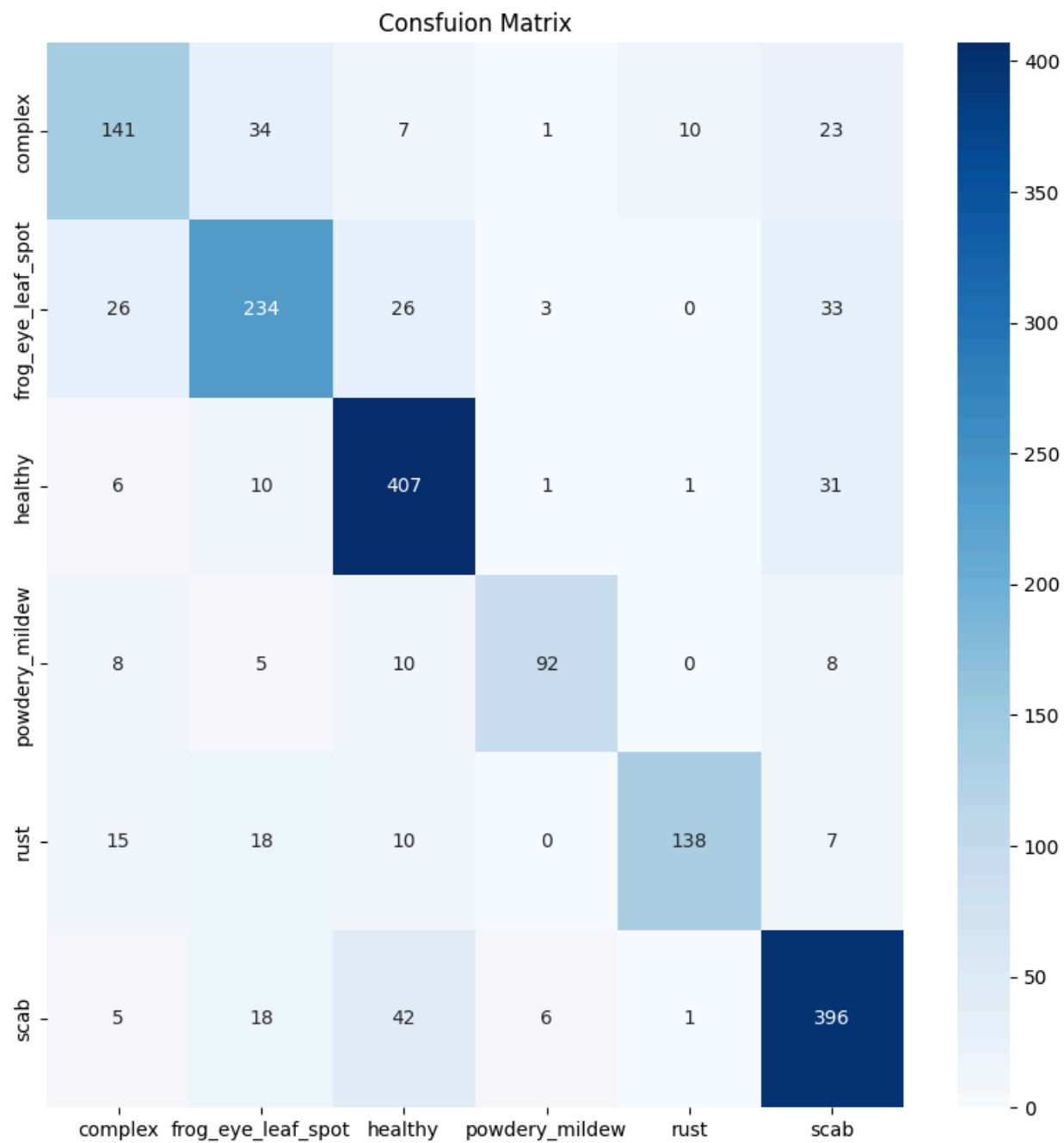
RF

Training Accuracy:

Accuracy score: 0.7326565143824028

Classification Report:

	precision	recall	f1-score	support
0	0.80	0.55	0.65	216
1	0.66	0.61	0.63	322
2	0.75	0.88	0.81	456
3	0.93	0.64	0.76	123
4	0.93	0.61	0.74	188
5	0.66	0.84	0.74	468
accuracy			0.73	1773
macro avg	0.79	0.69	0.72	1773
weighted avg	0.75	0.73	0.73	1773

Consfuion Matrix

MLP

Training Accuracy:

Accuracies with Respect to Epochs and Learning Rate
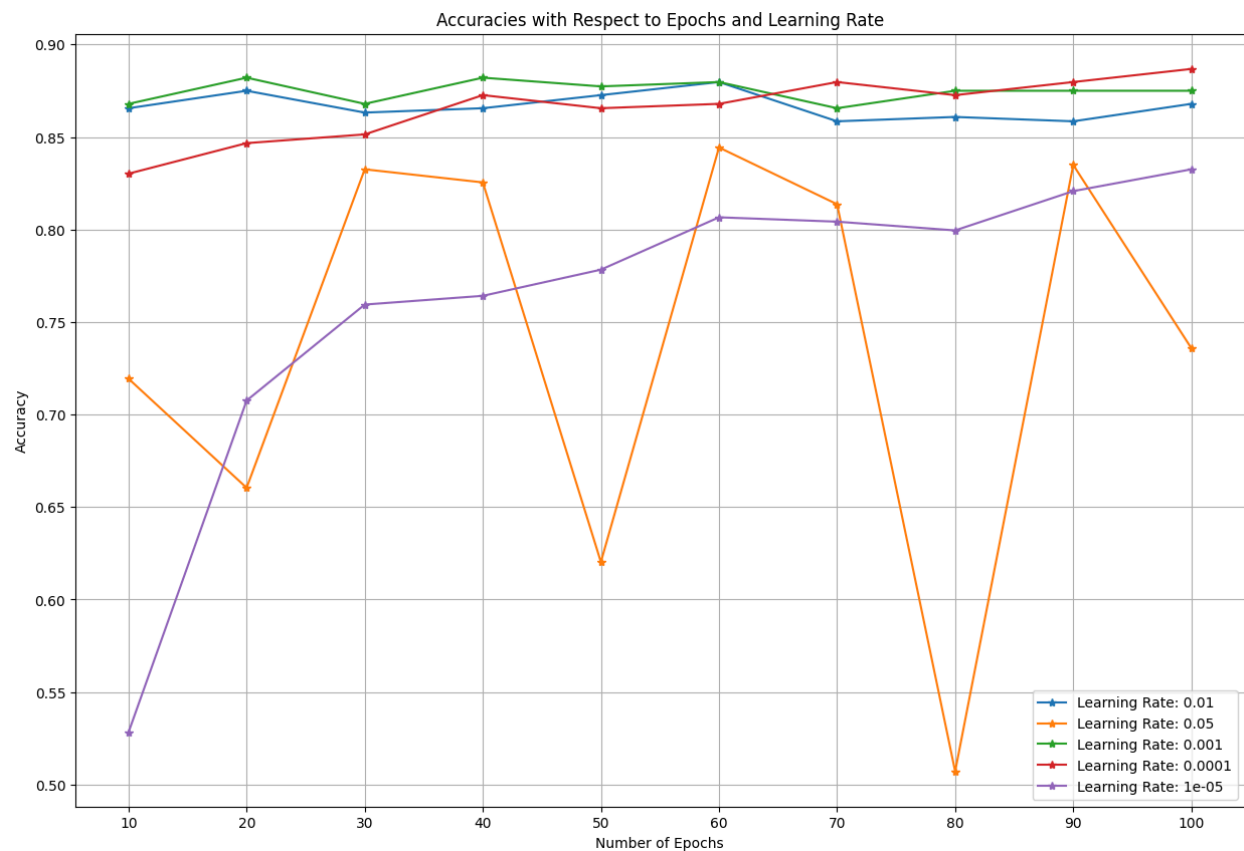
Validation Accuracy

Accuracy score: 0.875

Classification Report: precision   recall   f1-score   support

	precision	recall	f1-score	support
0	0.66	0.66	0.66	32
1	0.86	0.86	0.86	72
2	0.91	0.93	0.92	121
3	0.91	0.83	0.87	35
4	0.89	0.91	0.90	35
5	0.89	0.89	0.89	129
accuracy			0.88	424
macro avg	0.85	0.85	0.85	424
weighted avg	0.88	0.88	0.87	424

Confusion Matrix

Confusion Matrix
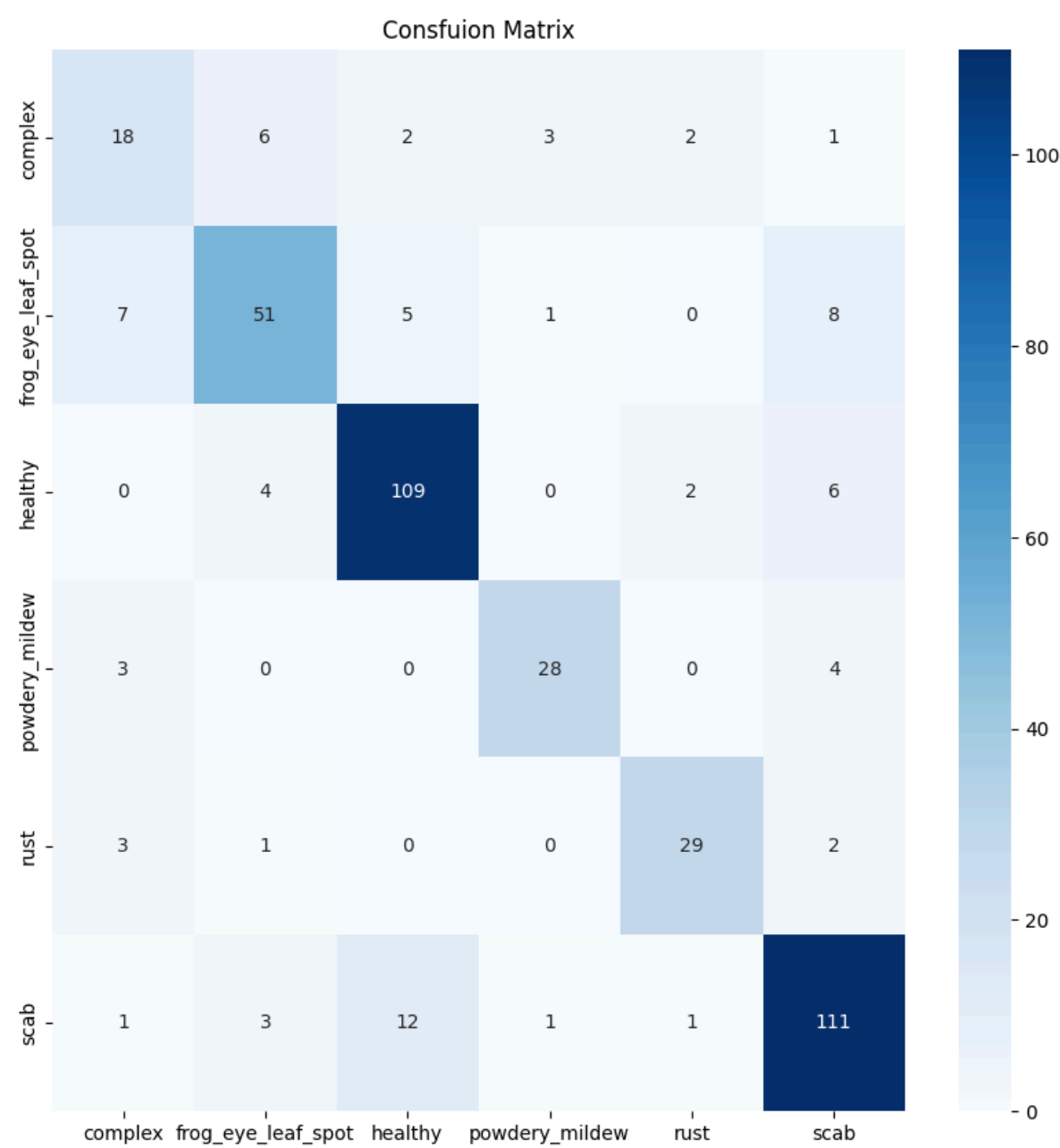
Test Accuracy

Report:

```
Accuracy score: 0.9032073310423826

Classification Report:               precision    recall  f1-score
support

                 0        0.81      0.78      0.80       203
                 1        0.92      0.86      0.89       316
                 2        0.94      0.94      0.94       459
                 3        0.91      0.99      0.95        90
                 4        0.89      0.92      0.90       196
                 5        0.90      0.92      0.91       482

          accuracy                            0.90      1746
         macro avg        0.89      0.90      0.90      1746
      weighted avg        0.90      0.90      0.90      1746
```
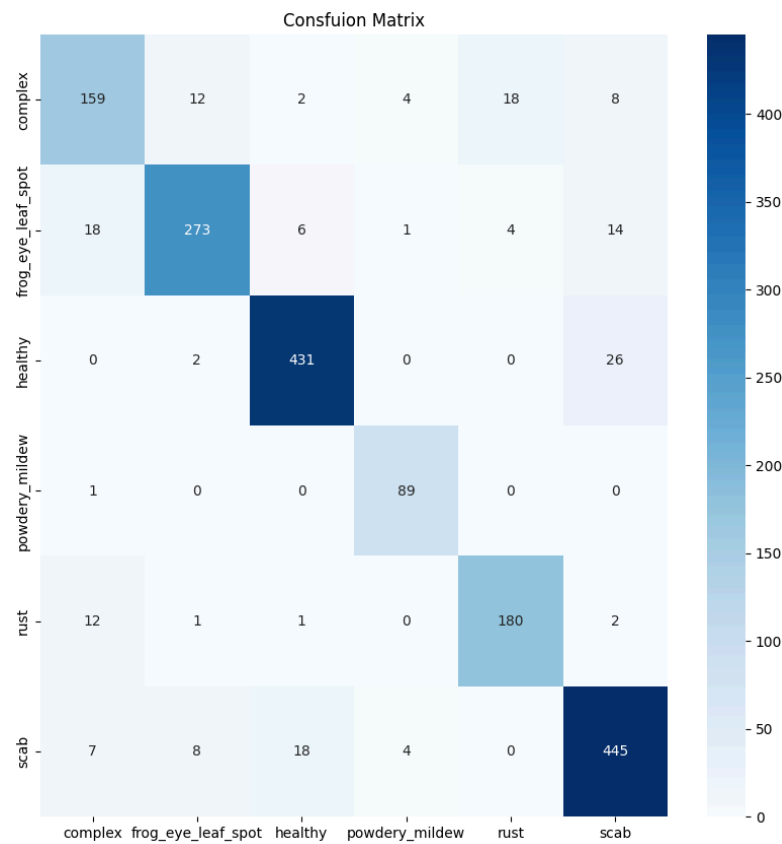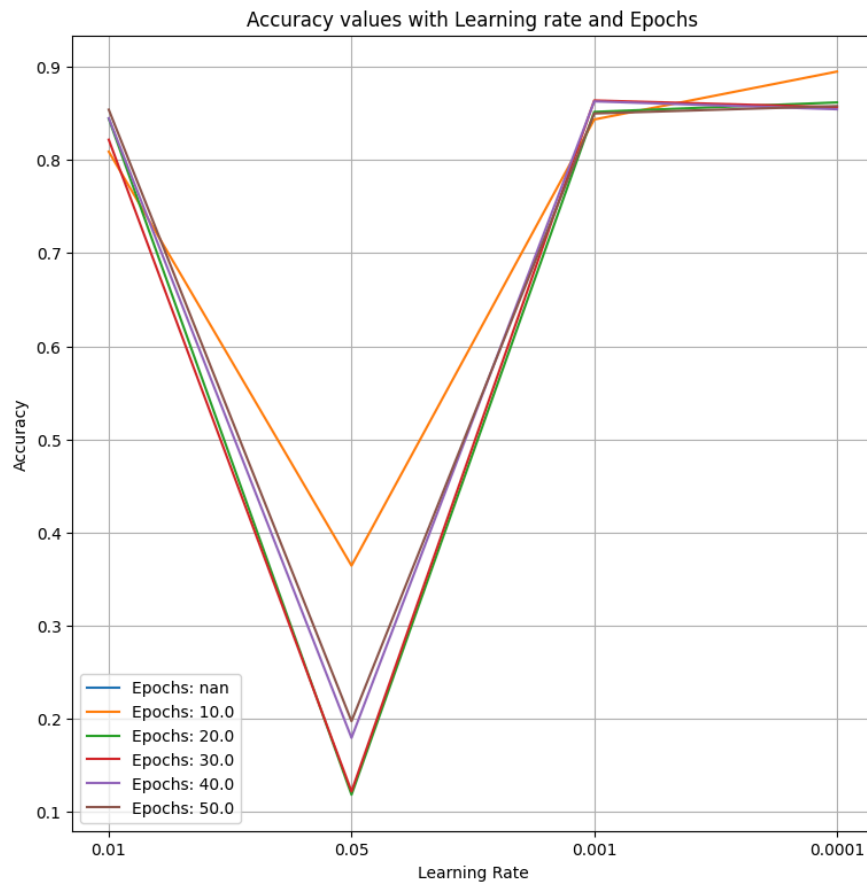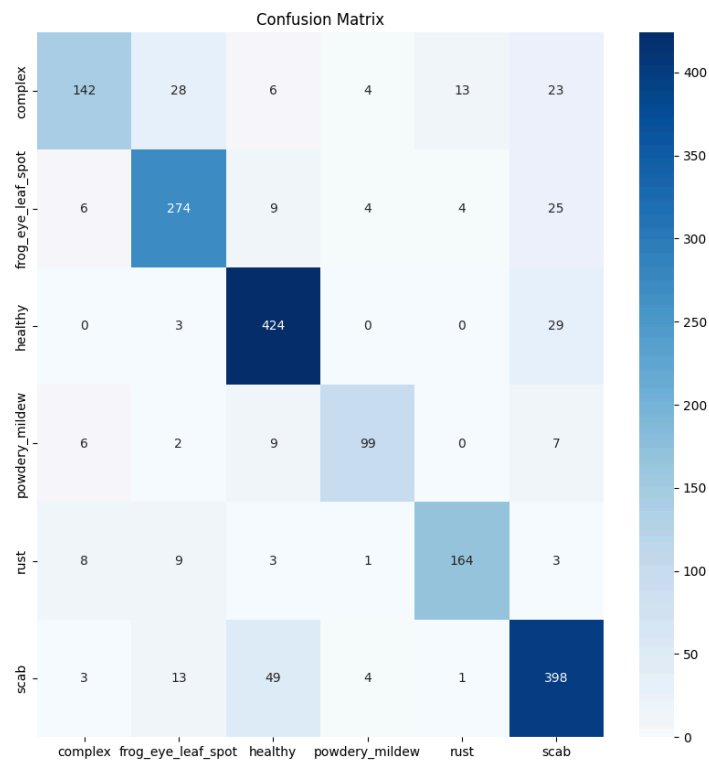
Confusion Matrix

Consfuion Matrix

ResNet-50

Training Accuracy Plot

Validation Confusion Matrix

Confusion Matrix

Classification Report

```
precision    recall    f1-score    support

           0    0.86      0.66        0.75        216
           1    0.83      0.85        0.84        322
           2    0.85      0.93        0.89        456
           3    0.88      0.80        0.84        123
           4    0.90      0.87        0.89        188
           5    0.82      0.85        0.84        468

    accuracy                          0.85       1773
   macro avg    0.86      0.83        0.84       1773
weighted avg    0.85      0.85        0.84       1773
```
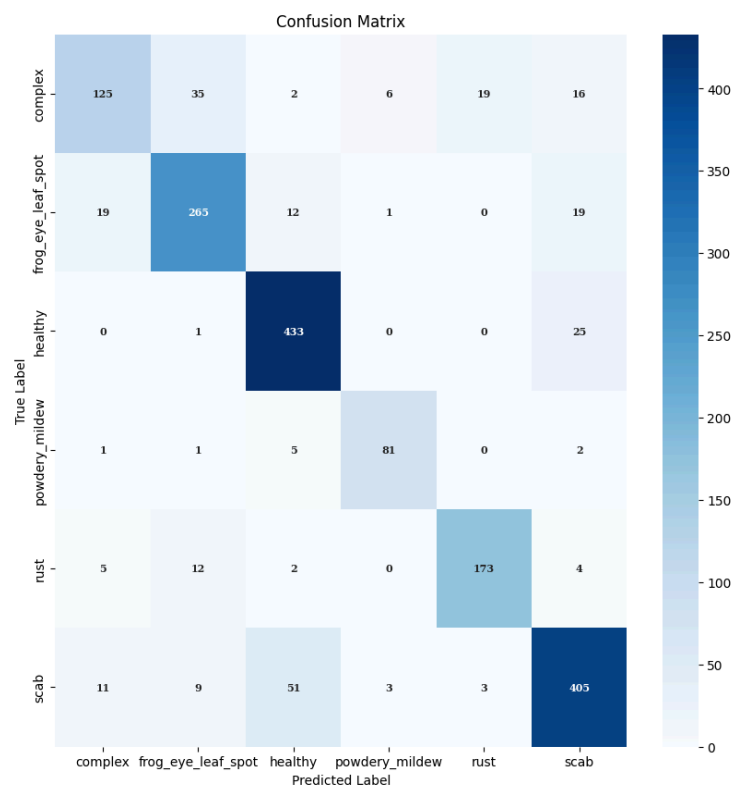
https://colab.research.google.com/drive/1Ns1pxvmsCWluCiXcHmYMjMKV9y9Ub0Bx#scrollTo=92IfbX0SEiS5

Testing Confusion Matrix

Testing Classification Report

	precision	recall	f1-score	support
0	0.78	0.62	0.69	203
1	0.82	0.84	0.83	316
2	0.86	0.94	0.90	459
3	0.89	0.90	0.90	90
4	0.89	0.88	0.88	196
5	0.86	0.84	0.85	482
accuracy			0.85	1746
macro avg	0.85	0.84	0.84	1746
weighted avg	0.85	0.85	0.85	1746