

-----Original Features-----

-----Training on fold 1 and testing on fold 2-----

fold 1 samples: 75

fold 2 samples: 75

Accuracy on fold 2: 0.9467

Confusion Matrix on full dataset:

```
[[50  0  0]
 [ 0 48  2]
 [ 0  2 48]]
```

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.96	0.96	0.96	50
Iris-virginica	0.96	0.96	0.96	50
accuracy			0.97	150
macro avg	0.97	0.97	0.97	150
weighted avg	0.97	0.97	0.97	150

-----Training on fold 2 and testing on fold 1-----

Accuracy on fold 1: 0.9333

Confusion Matrix on full dataset:

```
[[50  0  0]
 [ 0 49  1]
 [ 0  4 46]]
```

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.92	0.98	0.95	50
Iris-virginica	0.98	0.92	0.95	50
accuracy			0.97	150
macro avg	0.97	0.97	0.97	150
weighted avg	0.97	0.97	0.97	150

-----Part 2-----

Eigenvalues:

[4.22484077 0.24224357 0.07852391 0.02368303]

Eigenvectors:

```
[[ 0.36158968 -0.08226889  0.85657211  0.35884393]
 [ 0.65653988  0.72971237 -0.1757674  -0.07470647]
 [-0.58099728  0.59641809  0.07252408  0.54906091]
 [ 0.31725455 -0.32409435 -0.47971899  0.75112056]]
```

Proportion of Variance (PoV):

[0.92461621 0.97763178 0.99481691 1.]

Number of components selected (PoV > 0.90): 1

-----Training on fold 1 and testing on fold 2-----

fold 1 samples: 75

fold 2 samples: 75

Accuracy on fold 2: 0.9600

Confusion Matrix on full dataset:

```
[[50  0  0]
 [ 0 49  1]
 [ 0  2 48]]
```

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.96	0.98	0.97	50
Iris-virginica	0.98	0.96	0.97	50
accuracy			0.98	150
macro avg	0.98	0.98	0.98	150
weighted avg	0.98	0.98	0.98	150

-----Training on fold 2 and testing on fold 1-----
Accuracy on fold 1: 0.9333

Confusion Matrix on full dataset:

```
[[50  0  0]
 [ 0 47  3]
 [ 0  2 48]]
```

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.96	0.94	0.95	50
Iris-virginica	0.94	0.96	0.95	50
accuracy			0.97	150
macro avg	0.97	0.97	0.97	150
weighted avg	0.97	0.97	0.97	150

-----Part 3-----

Iteration 1:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']

Accuracy: 0.9600

Pr[accept]: 0.2494

Random Uniform: 0.3723

Status: Discarded

Iteration 2:

Subset: ['sepal-width', 'petal-width', 'z1', 'z2', 'z3', 'z4']

Accuracy: 0.9533

Pr[accept]: 0.4994

Random Uniform: 0.2719

Status: Accepted

Iteration 3:

Subset: ['petal-width', 'z1', 'z2', 'z4']

Accuracy: 0.9533

Pr[accept]: 1.0000

Random Uniform: 0.0822

Status: Accepted

Iteration 4:
Subset: ['sepal-width', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 2.0123
Random Uniform: 0.1164
Status: Improved

Iteration 5:
Subset: ['sepal-width', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 1.0000
Random Uniform: 0.1145
Status: Improved

Iteration 6:
Subset: ['sepal-width', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.4994
Random Uniform: 0.7166
Status: Discarded

Iteration 7:
Subset: ['z1', 'z3', 'z4']
Accuracy: 0.9533
Pr[accept]: 0.4994
Random Uniform: 0.1971
Status: Accepted

Iteration 8:
Subset: ['z1', 'z3', 'z4']
Accuracy: 0.9533
Pr[accept]: 0.0000
Random Uniform: 0.3422
Status: Discarded

Iteration 9:
Subset: ['sepal-length', 'z1', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 2.0123
Random Uniform: 0.9570
Status: Improved

Iteration 10:
Subset: ['sepal-length', 'z1', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0000
Random Uniform: 0.9284
Status: Discarded

Iteration 11:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.1245
Random Uniform: 0.8504
Status: Restart

Iteration 12:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1',

'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.2494
Random Uniform: 0.4768
Status: Discarded

Iteration 13:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1',
'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.4994
Random Uniform: 0.7370
Status: Discarded

Iteration 14:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1',
'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.4994
Random Uniform: 0.8762
Status: Discarded

Iteration 15:
Subset: ['sepal-width', 'petal-length', 'petal-width', 'z2', 'z3', 'z4']
Accuracy: 0.9533
Pr[accept]: 0.4994
Random Uniform: 0.3798
Status: Accepted

Iteration 16:
Subset: ['sepal-width', 'petal-length', 'petal-width', 'z2', 'z3']
Accuracy: 0.9600
Pr[accept]: 2.0123
Random Uniform: 0.4408
Status: Improved

Iteration 17:
Subset: ['sepal-width', 'petal-length', 'petal-width', 'z2', 'z3']
Accuracy: 0.9600
Pr[accept]: 0.2494
Random Uniform: 0.7720
Status: Discarded

Iteration 18:
Subset: ['sepal-width', 'petal-length', 'petal-width', 'z2', 'z3', 'z4']
Accuracy: 0.9467
Pr[accept]: 0.2494
Random Uniform: 0.0297
Status: Accepted

Iteration 19:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1',
'z2', 'z3', 'z4']
Accuracy: 0.9533
Pr[accept]: 2.0223
Random Uniform: 0.3267
Status: Improved

Iteration 20:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9600
Pr[accept]: 2.0123
Random Uniform: 0.9991
Status: Improved

Iteration 21:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0077
Random Uniform: 0.5953
Status: Restart

Iteration 22:

Subset: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 1.0000
Random Uniform: 0.0843
Status: Accepted

Iteration 23:

Subset: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 1.0000
Random Uniform: 0.6719
Status: Improved

Iteration 24:

Subset: ['sepal-width', 'petal-width', 'z1', 'z3']
Accuracy: 0.9467
Pr[accept]: 0.2494
Random Uniform: 0.2450
Status: Accepted

Iteration 25:

Subset: ['sepal-width', 'petal-width', 'z1', 'z3']
Accuracy: 0.9467
Pr[accept]: 0.1209
Random Uniform: 0.5894
Status: Discarded

Iteration 26:

Subset: ['sepal-width', 'petal-width', 'z1', 'z3']
Accuracy: 0.9467
Pr[accept]: 0.2445
Random Uniform: 0.9814
Status: Discarded

Iteration 27:

Subset: ['sepal-width', 'petal-width', 'z1', 'z3']
Accuracy: 0.9467
Pr[accept]: 0.1209
Random Uniform: 0.3981
Status: Discarded

Iteration 28:

Subset: ['sepal-width', 'petal-width', 'z1', 'z3']

Accuracy: 0.9467
Pr[accept]: 0.0598
Random Uniform: 0.7071
Status: Discarded

Iteration 29:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']

Accuracy: 0.9733
Pr[accept]: 16.7249
Random Uniform: 0.1876
Status: Improved

Iteration 30:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']

Accuracy: 0.9733
Pr[accept]: 0.1281
Random Uniform: 0.6348
Status: Discarded

Iteration 31:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']

Accuracy: 0.9733
Pr[accept]: 0.5041
Random Uniform: 0.9448
Status: Restart

Iteration 32:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1']

Accuracy: 0.9667
Pr[accept]: 0.5041
Random Uniform: 0.2495
Status: Accepted

Iteration 33:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1']

Accuracy: 0.9667
Pr[accept]: 0.2518
Random Uniform: 0.7369
Status: Discarded

Iteration 34:

Subset: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z2']

Accuracy: 0.9600
Pr[accept]: 0.5017
Random Uniform: 0.1471
Status: Accepted

Iteration 35:

Subset: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z2']

Accuracy: 0.9600
Pr[accept]: 0.0077
Random Uniform: 0.6763
Status: Discarded

Iteration 36:

Subset: ['petal-length', 'petal-width', 'z2']

Accuracy: 0.9533
Pr[accept]: 0.4994
Random Uniform: 0.3439
Status: Accepted

Iteration 37:

Subset: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2']
Accuracy: 0.9533
Pr[accept]: 1.0000
Random Uniform: 0.9020
Status: Accepted

Iteration 38:

Subset: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2']
Accuracy: 0.9533
Pr[accept]: 0.0075
Random Uniform: 0.6414
Status: Discarded

Iteration 39:

Subset: ['petal-length', 'petal-width', 'z1', 'z2']
Accuracy: 0.9533
Pr[accept]: 1.0000
Random Uniform: 0.5382
Status: Accepted

Iteration 40:

Subset: ['petal-width', 'z1', 'z2']
Accuracy: 0.9333
Pr[accept]: 0.1227
Random Uniform: 0.0971
Status: Accepted

Iteration 41:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 8.5238
Random Uniform: 0.2270
Status: Restart

Iteration 42:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.0326
Random Uniform: 0.0600
Status: Discarded

Iteration 43:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.5041
Random Uniform: 0.6857
Status: Discarded

Iteration 44:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1',

'z3']
Accuracy: 0.9733
Pr[accept]: 0.5041
Random Uniform: 0.7905
Status: Discarded

Iteration 45:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9667
Pr[accept]: 0.5041
Random Uniform: 0.2411
Status: Accepted

Iteration 46:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z2', 'z3']
Accuracy: 0.9667
Pr[accept]: 1.0000
Random Uniform: 0.5926
Status: Accepted

Iteration 47:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z2', 'z3']
Accuracy: 0.9667
Pr[accept]: 0.0634
Random Uniform: 0.5923
Status: Discarded

Iteration 48:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z2', 'z3']
Accuracy: 0.9667
Pr[accept]: 0.0160
Random Uniform: 0.6240
Status: Discarded

Iteration 49:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z2', 'z3']
Accuracy: 0.9667
Pr[accept]: 0.2518
Random Uniform: 0.4007
Status: Discarded

Iteration 50:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z3']
Accuracy: 0.9600
Pr[accept]: 0.5017
Random Uniform: 0.0007
Status: Accepted

Iteration 51:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 1.0000
Random Uniform: 0.2329
Status: Restart

Iteration 52:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']

Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.3870
Status: Discarded

Iteration 53:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9733
Pr[accept]: 1.0000
Random Uniform: 0.6844
Status: Accepted

Iteration 54:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.1281
Random Uniform: 0.3543
Status: Discarded

Iteration 55:

Subset: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9600
Pr[accept]: 0.2541
Random Uniform: 0.1099
Status: Accepted

Iteration 56:

Subset: ['petal-length', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9600
Pr[accept]: 1.0000
Random Uniform: 0.4640
Status: Accepted

Iteration 57:

Subset: ['petal-length', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9600
Pr[accept]: 0.0310
Random Uniform: 0.2866
Status: Discarded

Iteration 58:

Subset: ['petal-length', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9733
Pr[accept]: 4.0104
Random Uniform: 0.2019
Status: Improved

Iteration 59:

Subset: ['petal-length', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9733
Pr[accept]: 0.1281
Random Uniform: 0.9598
Status: Discarded

Iteration 60:

Subset: ['petal-length', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9733

Pr[accept]: 0.2541
Random Uniform: 0.9747
Status: Discarded

Iteration 61:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.9065
Status: Restart

Iteration 62:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.5041
Random Uniform: 0.8906
Status: Discarded

Iteration 63:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.4412
Status: Discarded

Iteration 64:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.4502
Status: Discarded

Iteration 65:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.5050
Status: Discarded

Iteration 66:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.0164
Random Uniform: 0.7052
Status: Discarded

Iteration 67:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.9496
Status: Discarded

Iteration 68:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.0021
Random Uniform: 0.8949
Status: Discarded

Iteration 69:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.1281
Random Uniform: 0.5671
Status: Discarded

Iteration 70:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.2541
Random Uniform: 0.6136
Status: Discarded

Iteration 71:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.0164
Random Uniform: 0.0797
Status: Restart

Iteration 72:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9667
Pr[accept]: 0.5041
Random Uniform: 0.1896
Status: Accepted

Iteration 73:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9533
Pr[accept]: 0.2518
Random Uniform: 0.0888
Status: Accepted

Iteration 74:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9533
Pr[accept]: 1.0000
Random Uniform: 0.2492
Status: Accepted

Iteration 75:
Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9600

Pr[accept]: 2.0123
Random Uniform: 0.4348
Status: Improved

Iteration 76:

Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.2494
Random Uniform: 0.5653
Status: Discarded

Iteration 77:

Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0039
Random Uniform: 0.5779
Status: Discarded

Iteration 78:

Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.4994
Random Uniform: 0.9245
Status: Discarded

Iteration 79:

Subset: ['sepal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 1.0000
Random Uniform: 0.1473
Status: Accepted

Iteration 80:

Subset: ['sepal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0077
Random Uniform: 0.8626
Status: Discarded

Iteration 81:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.1245
Random Uniform: 0.1983
Status: Restart

Iteration 82:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.1281
Random Uniform: 0.4740
Status: Discarded

Iteration 83:

Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1']
Accuracy: 0.9600
Pr[accept]: 0.2541

Random Uniform: 0.2285
Status: Accepted

Iteration 84:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1']
Accuracy: 0.9600
Pr[accept]: 0.4994
Random Uniform: 0.7249
Status: Discarded

Iteration 85:
Subset: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z2']
Accuracy: 0.9533
Pr[accept]: 0.4994
Random Uniform: 0.0541
Status: Accepted

Iteration 86:
Subset: ['petal-length', 'petal-width', 'z1', 'z2']
Accuracy: 0.9533
Pr[accept]: 1.0000
Random Uniform: 0.8311
Status: Accepted

Iteration 87:
Subset: ['petal-length', 'petal-width', 'z1', 'z4']
Accuracy: 0.9600
Pr[accept]: 2.0123
Random Uniform: 0.0888
Status: Improved

Iteration 88:
Subset: ['petal-length', 'petal-width', 'z1', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0310
Random Uniform: 0.3127
Status: Discarded

Iteration 89:
Subset: ['petal-length', 'petal-width', 'z1', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0077
Random Uniform: 0.1177
Status: Discarded

Iteration 90:
Subset: ['petal-length', 'petal-width', 'z1', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.0019
Random Uniform: 0.3583
Status: Discarded

Iteration 91:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.0310
Random Uniform: 0.0517
Status: Restart

Iteration 92:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Accuracy: 0.9733
Pr[accept]: 0.0164
Random Uniform: 0.7427
Status: Discarded

Iteration 93:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9667
Pr[accept]: 0.5041
Random Uniform: 0.2235
Status: Accepted

Iteration 94:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4']
Accuracy: 0.9667
Pr[accept]: 0.1263
Random Uniform: 0.7588
Status: Discarded

Iteration 95:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z4']
Accuracy: 0.9600
Pr[accept]: 0.5017
Random Uniform: 0.3051
Status: Accepted

Iteration 96:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9533
Pr[accept]: 0.4994
Random Uniform: 0.3155
Status: Accepted

Iteration 97:
Subset: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9533
Pr[accept]: 0.4969
Random Uniform: 0.8463
Status: Discarded

Iteration 98:
Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z4']
Accuracy: 0.9533
Pr[accept]: 1.0000
Random Uniform: 0.8195
Status: Accepted

Iteration 99:
Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9467

Pr[accept]: 0.4969
Random Uniform: 0.4333
Status: Accepted

Iteration 100:
Subset: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z2', 'z3']
Accuracy: 0.9467
Pr[accept]: 0.1209
Random Uniform: 0.8931
Status: Discarded

-----Training on fold 1 and testing on fold 2-----
fold 1 samples: 75
fold 2 samples: 75
Accuracy on fold 2: 0.9600

Confusion Matrix on full dataset:
[[50 0 0]
[0 49 1]
[0 2 48]]

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.96	0.98	0.97	50
Iris-virginica	0.98	0.96	0.97	50
accuracy			0.98	150
macro avg	0.98	0.98	0.98	150
weighted avg	0.98	0.98	0.98	150

-----Training on fold 2 and testing on fold 1-----
Accuracy on fold 1: 0.9067

Confusion Matrix on full dataset:
[[50 0 0]
[0 46 4]
[0 3 47]]

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.94	0.92	0.93	50
Iris-virginica	0.92	0.94	0.93	50
accuracy			0.95	150
macro avg	0.95	0.95	0.95	150
weighted avg	0.95	0.95	0.95	150

Best subset of features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']
Best accuracy: 0.9733333333333334
-----Part 4-----

Generation 1:
Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9600

Rank 2: Features: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z2'], Accuracy: 0.9533
Rank 3: Features: ['petal-width', 'z1', 'z2', 'z3', 'z4'], Accuracy: 0.9467
Rank 4: Features: ['sepal-width', 'petal-length', 'z2', 'z3', 'z4'], Accuracy: 0.9400
Rank 5: Features: ['sepal-length', 'sepal-width', 'z2', 'z3', 'z4'], Accuracy: 0.8333

Generation 2:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z4'], Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z2'], Accuracy: 0.9467
Rank 4: Features: ['sepal-length', 'petal-width', 'z1'], Accuracy: 0.9467
Rank 5: Features: ['petal-width', 'z1', 'z2', 'z3', 'z4'], Accuracy: 0.9467

Generation 3:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z4'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9600
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2'], Accuracy: 0.9533

Generation 4:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 4: Features: ['sepal-length', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9600

Generation 5:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9533
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z2', 'z4'], Accuracy: 0.9533

Generation 6:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z4'], Accuracy: 0.9667

Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length'], Accuracy: 0.9400

Generation 7:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z4'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z4'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 5: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9600

Generation 8:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z4'], Accuracy: 0.9533
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z4'], Accuracy: 0.9533
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z4'], Accuracy: 0.9467
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-width'], Accuracy: 0.9467

Generation 9:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z4'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z4'], Accuracy: 0.9533
Rank 5: Features: ['sepal-width', 'petal-width', 'z4'], Accuracy: 0.9067

Generation 10:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z4'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1', 'z4'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z4'], Accuracy: 0.9467

Generation 11:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600
Rank 5: Features: ['petal-length', 'petal-width'], Accuracy: 0.9533

Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z2', 'z3'],
Accuracy: 0.9200

Generation 18:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9533
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z1'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z4'], Accuracy:
0.9133

Generation 19:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z3'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z4'], Accuracy:
0.9067

Generation 20:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9533
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z4'], Accuracy: 0.9467
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length'], Accuracy: 0.9333

Generation 21:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-width'], Accuracy: 0.9467
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'z2'], Accuracy:
0.9333
Rank 5: Features: ['sepal-length', 'petal-width'], Accuracy: 0.9267

Generation 22:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9533
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z2'], Accuracy: 0.9533

Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z1'], Accuracy: 0.9400
Rank 5: Features: ['sepal-width', 'petal-width'], Accuracy: 0.9400

Generation 23:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z4'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z2'], Accuracy: 0.9600
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z2', 'z3'], Accuracy: 0.9533

Generation 24:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600

Generation 25:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'z1'], Accuracy: 0.9333
Rank 5: Features: ['sepal-length', 'petal-width', 'z2'], Accuracy: 0.9133

Generation 26:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length'], Accuracy: 0.9400

Generation 27:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 4: Features: ['petal-length', 'petal-width'], Accuracy: 0.9600
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600

Generation 28:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600

Rank 3: Features: ['sepal-length', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 5: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z4'],
Accuracy: 0.9533

Generation 29:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9667
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width'], Accuracy: 0.9600
Rank 5: Features: ['petal-width', 'z1', 'z4'], Accuracy: 0.9333

Generation 30:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z3', 'z4'], Accuracy: 0.9667
Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9533
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9467
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9467
Rank 5: Features: ['sepal-width', 'petal-width', 'z2', 'z4'], Accuracy: 0.9200

Generation 31:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z3', 'z4'], Accuracy: 0.9733
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9733
Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z3', 'z4'], Accuracy: 0.9667
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width'],
Accuracy: 0.9600
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9200

Generation 32:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9733
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9667
Rank 3: Features: ['sepal-length', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9533
Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z3', 'z4'], Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z3', 'z4'], Accuracy: 0.9467

Generation 33:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9600
Rank 2: Features: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z3',
'z4'], Accuracy: 0.9600
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z2', 'z3', 'z4'],
Accuracy: 0.9533
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9467

Rank 5: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9467

Generation 34:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9533
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9533
Rank 5: Features: ['sepal-width', 'petal-length', 'z3', 'z4'], Accuracy: 0.9133

Generation 35:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600
Rank 3: Features: ['sepal-length', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'], Accuracy: 0.9533
Rank 5: Features: ['sepal-width', 'petal-length', 'z1', 'z3', 'z4'], Accuracy: 0.9400

Generation 36:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9733
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9733
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9600
Rank 5: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9533

Generation 37:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9667
Rank 3: Features: ['sepal-width', 'petal-length', 'z1', 'z3'], Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600
Rank 5: Features: ['petal-width', 'z1', 'z2', 'z3'], Accuracy: 0.9200

Generation 38:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3'], Accuracy: 0.9667
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'], Accuracy: 0.9467
Rank 5: Features: ['sepal-width', 'petal-length', 'z1', 'z3'], Accuracy: 0.9333

Generation 39:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3'],
Accuracy: 0.9733
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9667
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z3', 'z4'],
Accuracy: 0.9600
Rank 5: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9533

Generation 40:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'],
Accuracy: 0.9733
Rank 2: Features: ['petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'],
Accuracy: 0.9667
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3'],
Accuracy: 0.9600
Rank 5: Features: ['sepal-width', 'petal-length', 'z1', 'z2', 'z3'], Accuracy:
0.9400

Generation 41:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9733
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'],
Accuracy: 0.9667
Rank 3: Features: ['petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'],
Accuracy: 0.9600
Rank 4: Features: ['petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'],
Accuracy: 0.9533
Rank 5: Features: ['sepal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'],
Accuracy: 0.9467

Generation 42:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9667
Rank 2: Features: ['petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'],
Accuracy: 0.9667
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'],
Accuracy: 0.9600
Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'],
Accuracy: 0.9600
Rank 5: Features: ['sepal-width', 'petal-width', 'z1', 'z2', 'z3', 'z4'], Accuracy:
0.9467

Generation 43:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width',
'z1', 'z3'], Accuracy: 0.9667
Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'],
Accuracy: 0.9600
Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'],
Accuracy: 0.9600
Rank 4: Features: ['petal-length', 'petal-width', 'z1', 'z2', 'z3', 'z4'],
Accuracy: 0.9533
Rank 5: Features: ['petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy:
0.9533

Generation 44:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9733

Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667

Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667

Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600

Rank 5: Features: ['sepal-width', 'petal-width', 'z1', 'z3'], Accuracy: 0.9467

Generation 45:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9667

Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667

Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667

Rank 4: Features: ['sepal-width', 'petal-width', 'z1', 'z3'], Accuracy: 0.9333

Rank 5: Features: ['sepal-length', 'sepal-width', 'z1', 'z3'], Accuracy: 0.9200

Generation 46:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9733

Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9667

Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667

Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9600

Rank 5: Features: ['sepal-width', 'petal-length', 'petal-width', 'z2', 'z3', 'z4'], Accuracy: 0.9467

Generation 47:

Rank 1: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667

Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9667

Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9667

Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600

Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z2', 'z3'], Accuracy: 0.9533

Generation 48:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9733

Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600

Rank 3: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9600

Rank 4: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9600

Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'z1', 'z3'], Accuracy: 0.9267

Generation 49:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9733
 Rank 2: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9600
 Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9533
 Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1'], Accuracy: 0.9533
 Rank 5: Features: ['sepal-width', 'petal-width', 'z1', 'z3'], Accuracy: 0.9333

Generation 50:

Rank 1: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667
 Rank 2: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667
 Rank 3: Features: ['sepal-width', 'petal-length', 'petal-width', 'z1', 'z3'], Accuracy: 0.9667
 Rank 4: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9600
 Rank 5: Features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3', 'z4'], Accuracy: 0.9600

-----Training on fold 1 and testing on fold 2-----

fold 1 samples: 75

fold 2 samples: 75

Accuracy on fold 2: 0.9733

Confusion Matrix on full dataset:

```
[[50  0  0]
 [ 0 48  2]
 [ 0  0 50]]
```

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	1.00	0.96	0.98	50
Iris-virginica	0.96	1.00	0.98	50
accuracy			0.99	150
macro avg	0.99	0.99	0.99	150
weighted avg	0.99	0.99	0.99	150

-----Training on fold 2 and testing on fold 1-----

Accuracy on fold 1: 0.9600

Confusion Matrix on full dataset:

```
[[50  0  0]
 [ 0 48  2]
 [ 0  1 49]]
```

Classification Report for full dataset:

	precision	recall	f1-score	support
Iris-setosa	1.00	1.00	1.00	50
Iris-versicolor	0.98	0.96	0.97	50
Iris-virginica	0.96	0.98	0.97	50
accuracy			0.98	150
macro avg	0.98	0.98	0.98	150

weighted avg	0.98	0.98	0.98	150
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Best features: ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'z1', 'z3']

Accuracy: 0.9666666666666668