

Genomic Information Dataset - GDS1615 full NoFeature.csv

Run: 1, Selected Features = 35, AUC-ROC = 91.62%, Accuracy = 81.91%
Run: 2, Selected Features = 48, AUC-ROC = 91.23%, Accuracy = 79.48%
Run: 3, Selected Features = 43, AUC-ROC = 92.22%, Accuracy = 78.80%
Run: 4, Selected Features = 35, AUC-ROC = 94.87%, Accuracy = 86.58%
Run: 5, Selected Features = 44, AUC-ROC = 88.02%, Accuracy = 77.94%
Run: 6, Selected Features = 45, AUC-ROC = 92.60%, Accuracy = 83.51%
Run: 7, Selected Features = 49, AUC-ROC = 91.10%, Accuracy = 80.37%
Run: 8, Selected Features = 39, AUC-ROC = 89.34%, Accuracy = 77.88%
Run: 9, Selected Features = 37, AUC-ROC = 94.62%, Accuracy = 85.85%
Run: 10, Selected Features = 48, AUC-ROC = 93.37%, Accuracy = 82.74%

Selected Features (mean) = 42.30

AUC-ROC (mean) = 91.90

AUC-ROC (original) = 92.47

Selected Features (mean, Accuracy) = 38.10

Accuracy (mean) = 81.50

Accuracy (original) = 76.49

Standard Deviation of Selected Features (AUC) = 5.16

Standard Deviation of AUC-ROC = 2.04

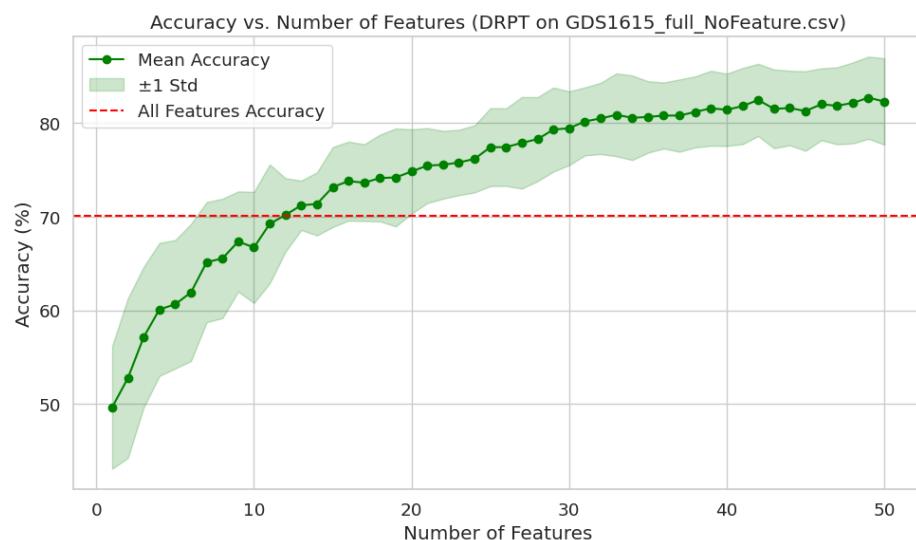
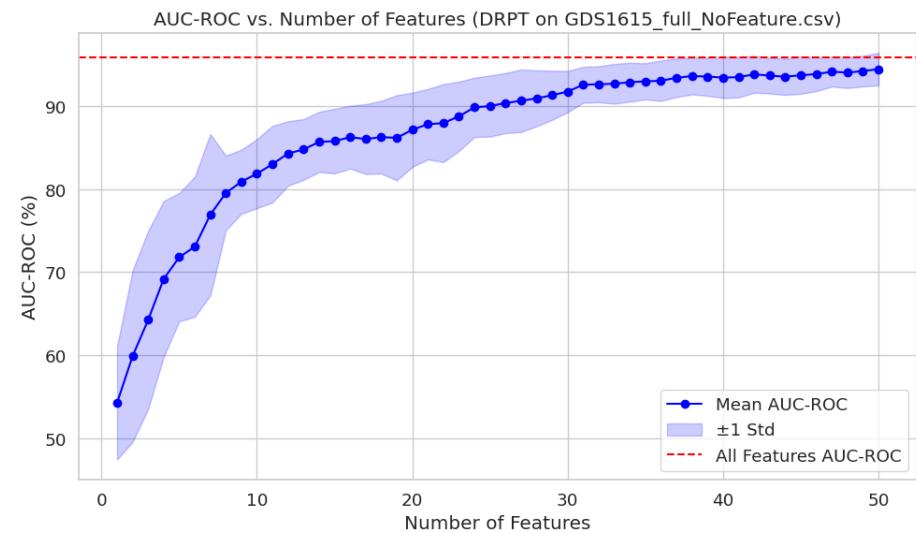
Standard Deviation of Selected Features (Accuracy) = 7.29

Standard Deviation of Accuracy = 2.98

Optimal subset = [5237 5819 5509 6096 5027 4998 2403 2464 7961 5076 4527 8503 7999 6667
5105 4583 5080 7622 8139 5816 6027 3656 8487 8056 4880 5722 1030 4246
6064 7624 4763 5202 2016 7479 3933]

Running Time: 285.00 seconds

Memory Usage: 0.01 GB



Classifier: SVM

Genomic Information Dataset - GDS1615 full NoFeature.csv

```

Run: 1, Selected Features = 49, AUC-ROC = 91.60%, Accuracy = 80.34%
Run: 2, Selected Features = 50, AUC-ROC = 97.40%, Accuracy = 88.18%
Run: 3, Selected Features = 50, AUC-ROC = 94.89%, Accuracy = 82.00%
Run: 4, Selected Features = 40, AUC-ROC = 96.36%, Accuracy = 89.82%
Run: 5, Selected Features = 42, AUC-ROC = 94.27%, Accuracy = 81.20%
Run: 6, Selected Features = 49, AUC-ROC = 95.72%, Accuracy = 86.68%
Run: 7, Selected Features = 50, AUC-ROC = 92.92%, Accuracy = 80.40%
Run: 8, Selected Features = 50, AUC-ROC = 92.36%, Accuracy = 81.02%
Run: 9, Selected Features = 39, AUC-ROC = 96.99%, Accuracy = 88.28%
Run: 10, Selected Features = 47, AUC-ROC = 95.14%, Accuracy = 80.31%

```

Selected Features (mean) = 46.60

AUC-ROC (mean) = 94.76

AUC-ROC (original) = 95.87

Selected Features (mean, Accuracy) = 41.30

Accuracy (mean) = 83.82

Accuracy (original) = 70.12

Standard Deviation of Selected Features (AUC) = 4.25

Standard Deviation of AUC-ROC = 1.87

Standard Deviation of Selected Features (Accuracy) = 9.97

Standard Deviation of Accuracy = 3.70

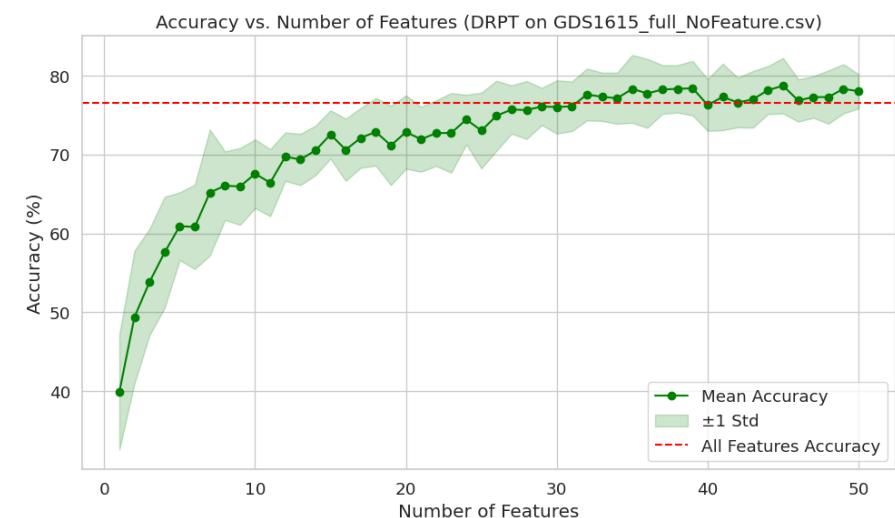
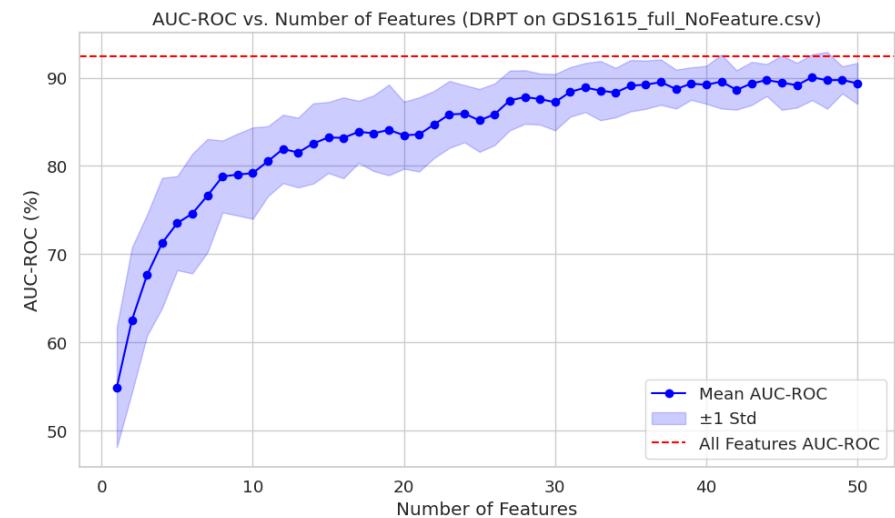
```

Optimal subset = [6803 4466 5714 7961 4205 3298 4338 167 2168 5264 4364 4185 7100 6253
4305 3647 3112 4473 5685 5752 4462 5901 5054 5509 7614 6273 4527 4488
4051 6959 2122 3106 4739 5495 5534 3793 5568 6109 5443 7133 2909 3850
3941 6667 6269 8590 8487 4332 5718 3569]

```

Running Time: 51.80 seconds

Memory Usage: 0.05 GB



Classifier: Random Forest

Genomic Information Dataset - GDS1615 full NoFeature.csv

```
Run: 1, Selected Features = 42, AUC-ROC = 93.94%, Accuracy = 87.45%
Run: 2, Selected Features = 46, AUC-ROC = 96.38%, Accuracy = 85.85%
Run: 3, Selected Features = 50, AUC-ROC = 93.37%, Accuracy = 81.97%
Run: 4, Selected Features = 47, AUC-ROC = 95.61%, Accuracy = 87.38%
Run: 5, Selected Features = 42, AUC-ROC = 91.62%, Accuracy = 78.00%
Run: 6, Selected Features = 49, AUC-ROC = 94.11%, Accuracy = 82.74%
Run: 7, Selected Features = 46, AUC-ROC = 94.61%, Accuracy = 81.91%
Run: 8, Selected Features = 50, AUC-ROC = 91.10%, Accuracy = 77.97%
Run: 9, Selected Features = 49, AUC-ROC = 96.09%, Accuracy = 87.48%
Run: 10, Selected Features = 50, AUC-ROC = 95.14%, Accuracy = 81.85%
```

Selected Features (mean) = 47.10

AUC-ROC (mean) = 94.20

AUC-ROC (original) = 98.98

Selected Features (mean, Accuracy) = 42.00

Accuracy (mean) = 83.26

Accuracy (original) = 91.38

Standard Deviation of Selected Features (AUC) = 2.95

Standard Deviation of AUC-ROC = 1.69

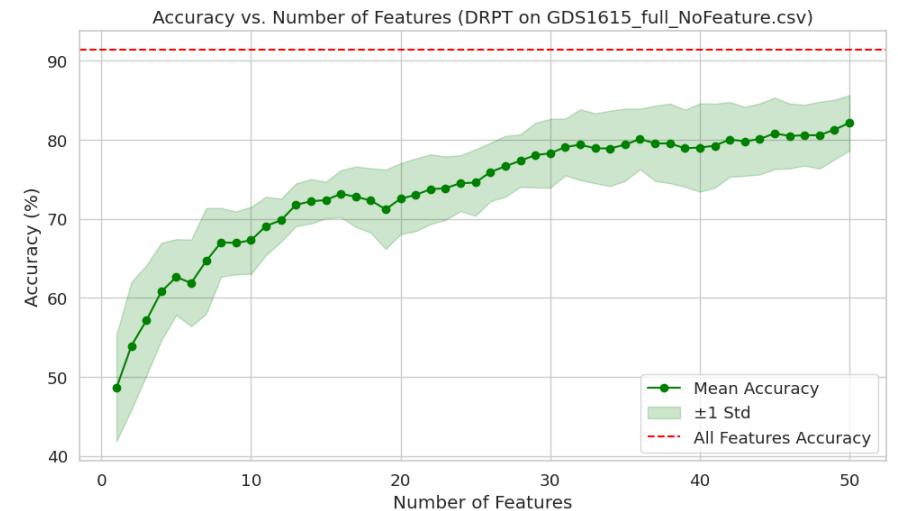
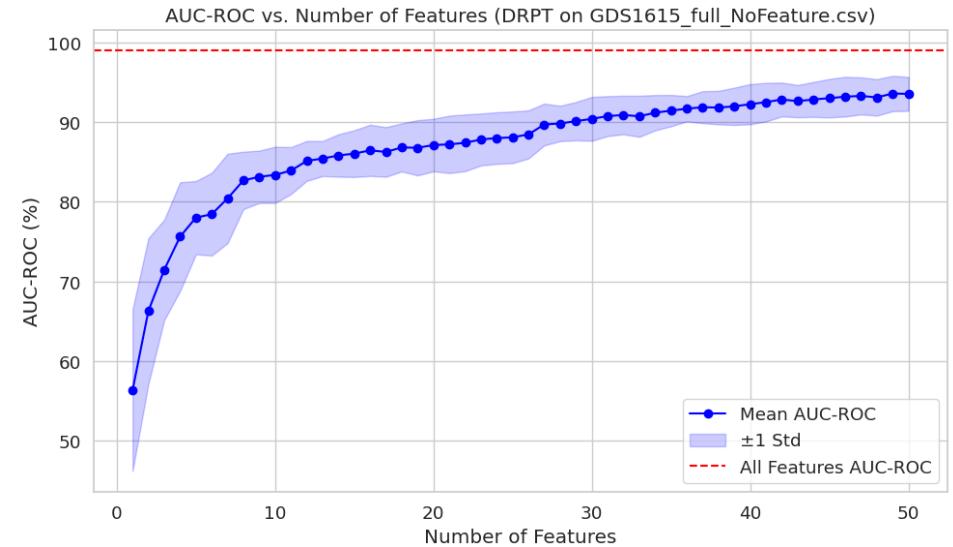
Standard Deviation of Selected Features (Accuracy) = 7.46

Standard Deviation of Accuracy = 3.47

Optimal subset = [6803 4466 5714 7961 4205 3298 4338 167 2168 5264 4364 4185 7100 6253
4305 3647 3112 4473 5685 5752 4462 5901 5054 5509 7614 6273 4527 4488
4051 6959 2122 3106 4739 5495 5534 3793 5568 6109 5443 7133 2909 3850
3941 6667 6269 8590]

Running Time: 85.70 seconds

Memory Usage: 0.06 GB



Classifier: Logistic Regression

Genomic Information Dataset - GDS1615_full_NoFeature.csv

```
Run: 1, Selected Features = 50, AUC-ROC = 91.09%, Accuracy = 76.49%
Run: 2, Selected Features = 40, AUC-ROC = 94.40%, Accuracy = 81.08%
Run: 3, Selected Features = 32, AUC-ROC = 93.05%, Accuracy = 83.54%
Run: 4, Selected Features = 46, AUC-ROC = 95.77%, Accuracy = 85.82%
Run: 5, Selected Features = 49, AUC-ROC = 87.67%, Accuracy = 74.00%
Run: 6, Selected Features = 49, AUC-ROC = 92.59%, Accuracy = 81.20%
Run: 7, Selected Features = 50, AUC-ROC = 87.71%, Accuracy = 75.63%
Run: 8, Selected Features = 50, AUC-ROC = 89.15%, Accuracy = 74.83%
Run: 9, Selected Features = 50, AUC-ROC = 93.00%, Accuracy = 82.65%
Run: 10, Selected Features = 29, AUC-ROC = 87.40%, Accuracy = 73.26%
```

Selected Features (mean) = 44.50

AUC-ROC (mean) = 91.18

AUC-ROC (original) = 86.45

Selected Features (mean, Accuracy) = 41.20

Accuracy (mean) = 78.85

Accuracy (original) = 70.18

Standard Deviation of Selected Features (AUC) = 7.62

Standard Deviation of AUC-ROC = 2.88

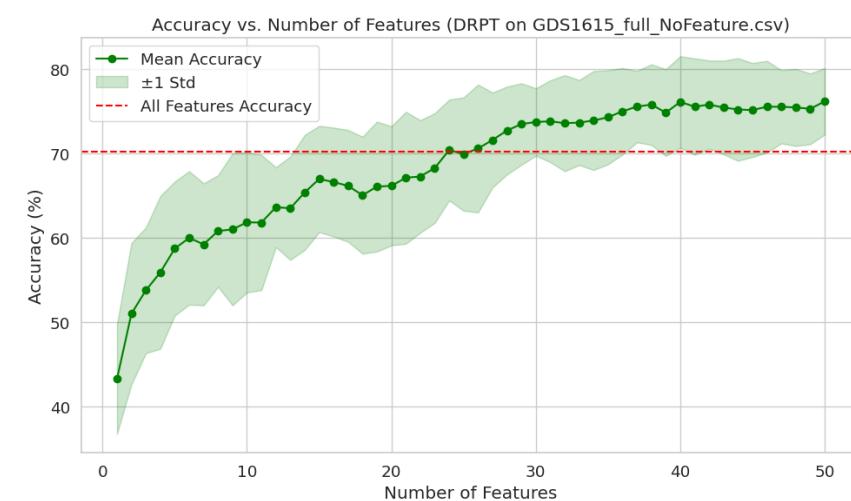
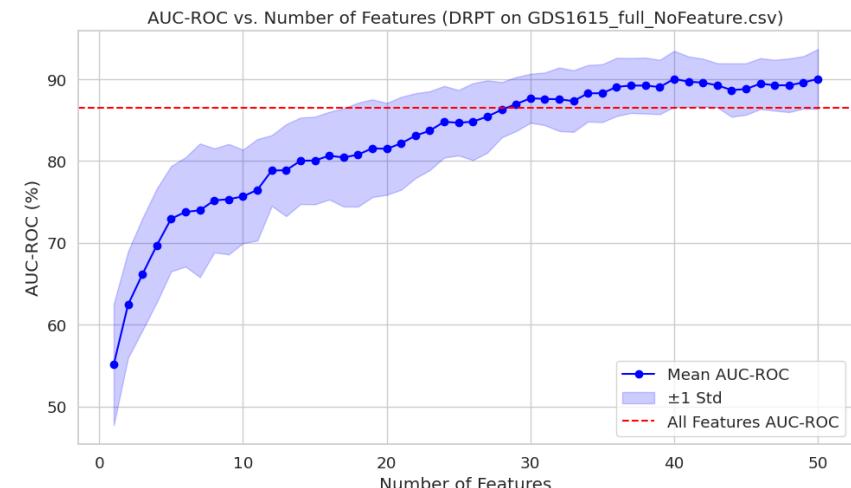
Standard Deviation of Selected Features (Accuracy) = 6.14

Standard Deviation of Accuracy = 4.27

```
Optimal subset = [5237 5819 5509 6096 5027 4998 2403 2464 7961 5076 4527 8503 7999 6667
 5105 4583 5080 7622 8139 5816 6027 3656 8487 8056 4880 5722 1030 4246
 6064 7624 4763 5202 2016 7479 3933 6080 423 1467 996 8466 7277 3541
 4579 8361 7458 5746]
```

Running Time: 31.25 seconds

Memory Usage: 0.02 GB



Classifier: KNN

Genomic Information Dataset - GDS1615_full_NoFeature.csv

```
Run: 1, Selected Features = 40, AUC-ROC = 73.76%, Accuracy = 69.35%
Run: 2, Selected Features = 39, AUC-ROC = 76.80%, Accuracy = 72.49%
Run: 3, Selected Features = 17, AUC-ROC = 76.47%, Accuracy = 70.95%
Run: 4, Selected Features = 35, AUC-ROC = 76.09%, Accuracy = 72.43%
Run: 5, Selected Features = 28, AUC-ROC = 72.39%, Accuracy = 65.45%
Run: 6, Selected Features = 30, AUC-ROC = 80.29%, Accuracy = 74.83%
Run: 7, Selected Features = 49, AUC-ROC = 78.29%, Accuracy = 73.97%
Run: 8, Selected Features = 48, AUC-ROC = 69.88%, Accuracy = 63.72%
Run: 9, Selected Features = 31, AUC-ROC = 74.99%, Accuracy = 68.52%
Run: 10, Selected Features = 42, AUC-ROC = 71.57%, Accuracy = 64.68%
```

Selected Features (mean) = 35.90

AUC-ROC (mean) = 75.05

AUC-ROC (original) = 71.28

Selected Features (mean, Accuracy) = 36.00

Accuracy (mean) = 69.64

Accuracy (original) = 64.65

Standard Deviation of Selected Features (AUC) = 9.28

Standard Deviation of AUC-ROC = 3.03

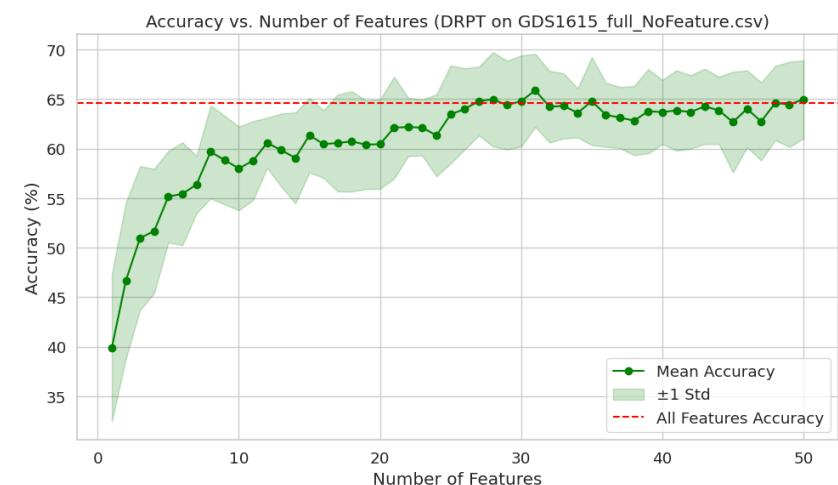
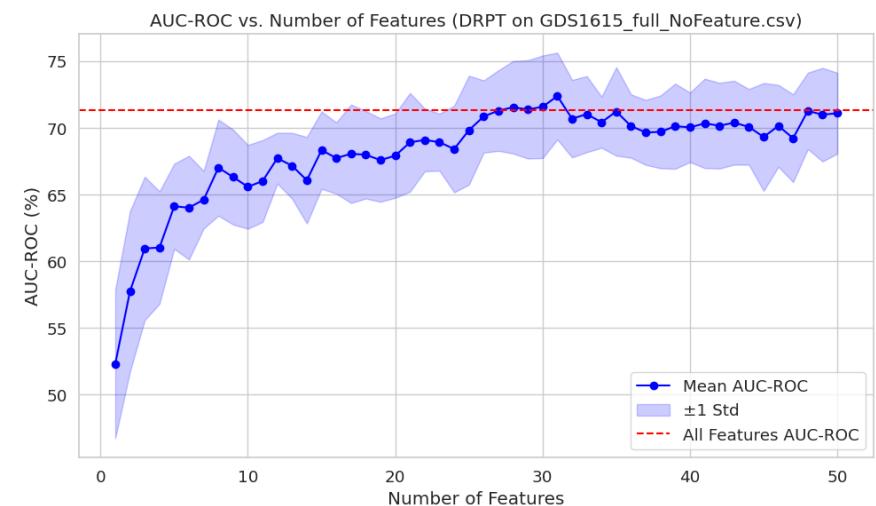
Standard Deviation of Selected Features (Accuracy) = 8.92

Standard Deviation of Accuracy = 3.77

```
Optimal subset = [7257 4677 5387 5116 4185 4590 5385 4466 4739 6586 4810 1782 4722 2752
4205 4019 3579 6051 1114 6336 2016 2570 1256 7428 6019 3796 4488 190
3792 3647]
```

Running Time: 42.87 seconds

Memory Usage: 0.05 GB



Classifier: Decision Tree

Genomic Information Dataset – GDS968_full_NoFeature.csv

```
Run: 1, Selected Features = 48, AUC-ROC = 89.89%, Accuracy = 70.84%
Run: 2, Selected Features = 50, AUC-ROC = 89.55%, Accuracy = 69.04%
Run: 3, Selected Features = 46, AUC-ROC = 92.08%, Accuracy = 74.82%
Run: 4, Selected Features = 45, AUC-ROC = 91.68%, Accuracy = 73.68%
Run: 5, Selected Features = 49, AUC-ROC = 92.15%, Accuracy = 73.61%
Run: 6, Selected Features = 48, AUC-ROC = 94.05%, Accuracy = 80.13%
Run: 7, Selected Features = 50, AUC-ROC = 93.64%, Accuracy = 73.11%
Run: 8, Selected Features = 44, AUC-ROC = 88.79%, Accuracy = 67.82%
Run: 9, Selected Features = 50, AUC-ROC = 92.64%, Accuracy = 75.46%
Run: 10, Selected Features = 50, AUC-ROC = 89.91%, Accuracy = 67.85%
```

Selected Features (mean) = 48.00

AUC-ROC (mean) = 91.44

AUC-ROC (original) = 96.74

Selected Features (mean, Accuracy) = 48.40

Accuracy (mean) = 72.64

Accuracy (original) = 74.84

Standard Deviation of Selected Features (AUC) = 2.14

Standard Deviation of AUC-ROC = 1.71

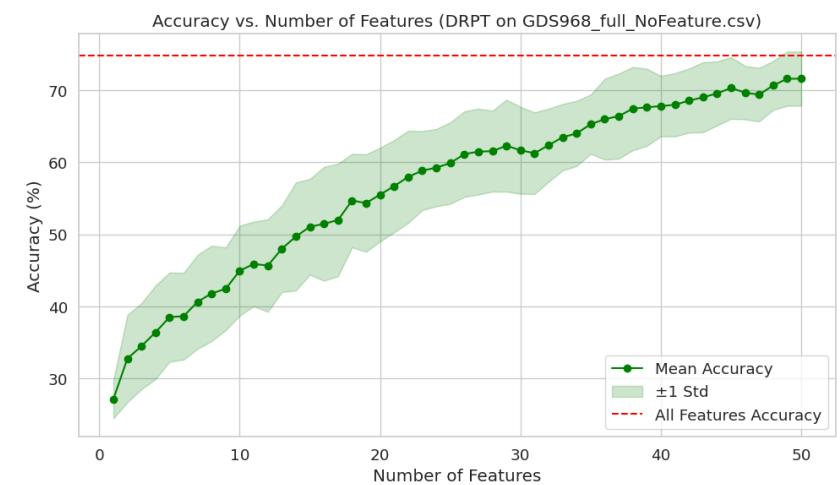
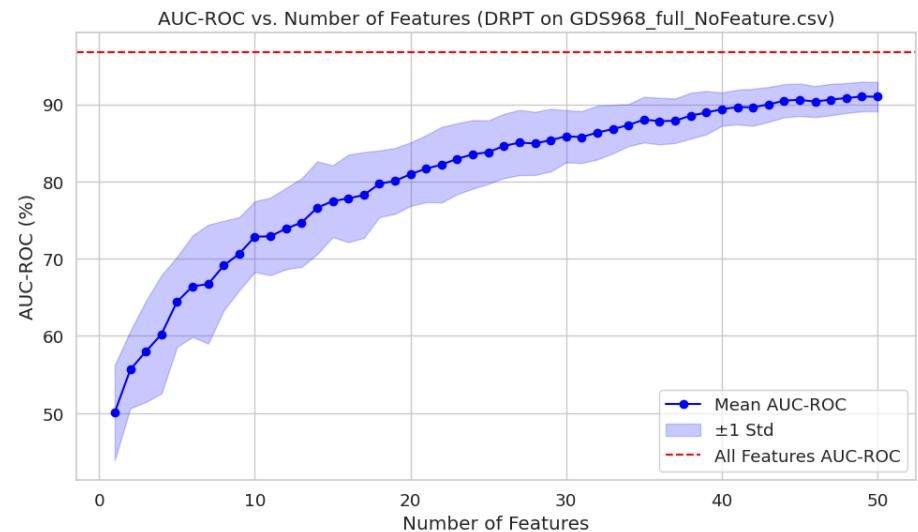
Standard Deviation of Selected Features (Accuracy) = 2.24

Standard Deviation of Accuracy = 3.65

```
Optimal subset = [6409 5138 6851 7550 7534 90 4295 4242 4533 6006 4641 8169 7705 1967
4273 3767 6000 5336 164 6813 4653 3048 3452 5734 4627 2699 1832 2724
970 5495 3446 7353 4614 2479 7569 4987 1943 124 4860 1325 3003 5409
3193 1228 7724 1301 7876 5334]
```

Running Time: 72.01 seconds

Memory Usage: 0.01 GB



Classifier: SVM

Genomic Information Dataset – GDS968_full_NoFeature.csv

```
Run: 1, Selected Features = 43, AUC-ROC = 85.48%, Accuracy = 66.71%
Run: 2, Selected Features = 49, AUC-ROC = 85.82%, Accuracy = 63.13%
Run: 3, Selected Features = 49, AUC-ROC = 88.15%, Accuracy = 66.67%
Run: 4, Selected Features = 49, AUC-ROC = 86.62%, Accuracy = 64.92%
Run: 5, Selected Features = 47, AUC-ROC = 86.17%, Accuracy = 62.52%
Run: 6, Selected Features = 47, AUC-ROC = 90.17%, Accuracy = 71.33%
Run: 7, Selected Features = 49, AUC-ROC = 88.71%, Accuracy = 66.66%
Run: 8, Selected Features = 49, AUC-ROC = 82.97%, Accuracy = 61.43%
Run: 9, Selected Features = 41, AUC-ROC = 89.65%, Accuracy = 72.50%
Run: 10, Selected Features = 45, AUC-ROC = 82.81%, Accuracy = 56.66%
```

Selected Features (mean) = 46.80

AUC-ROC (mean) = 86.66

AUC-ROC (original) = 91.34

Selected Features (mean, Accuracy) = 42.60

Accuracy (mean) = 65.25

Accuracy (original) = 71.92

Standard Deviation of Selected Features (AUC) = 2.75

Standard Deviation of AUC-ROC = 2.42

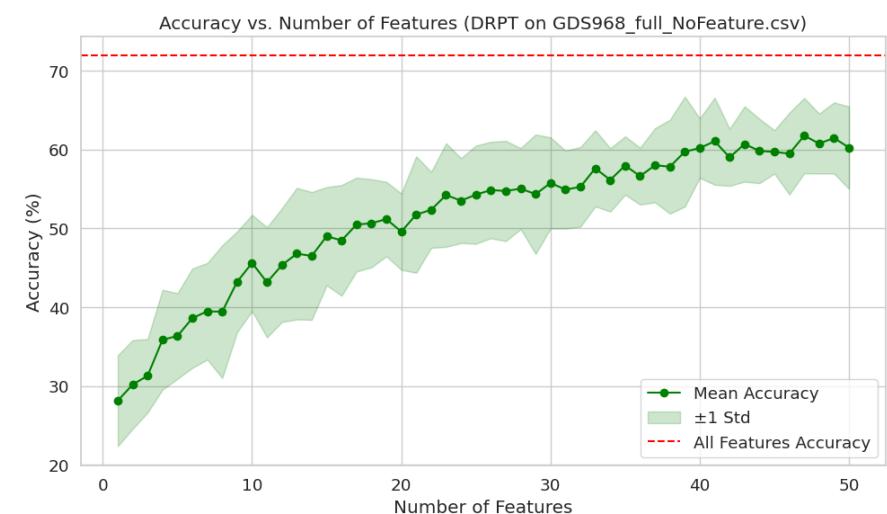
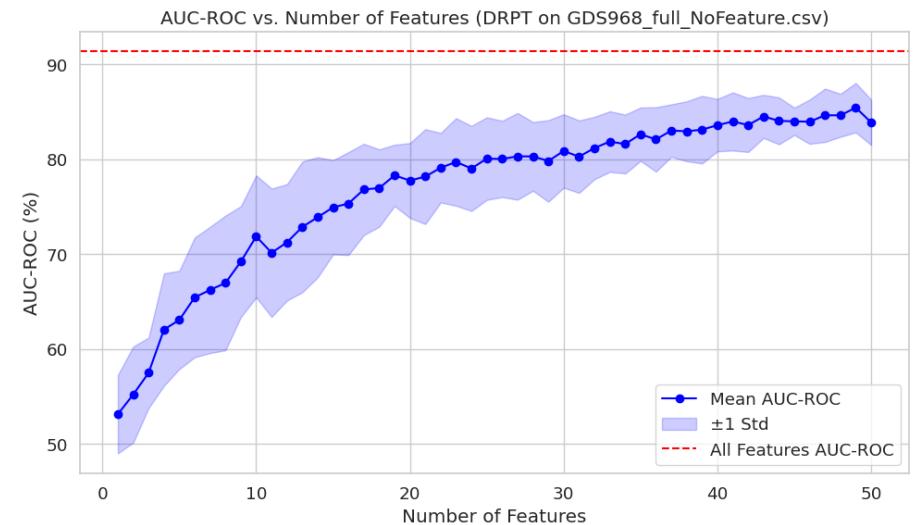
Standard Deviation of Selected Features (Accuracy) = 6.79

Standard Deviation of Accuracy = 4.43

Optimal subset = [6409 5138 6851 7550 7534 90 4295 4242 4533 6006 4641 8169 7705 1967
4273 3767 6000 5336 164 6813 4653 3048 3452 5734 4627 2699 1832 2724
970 5495 3446 7353 4614 2479 7569 4987 1943 124 4860 1325 3003 5409
3193 1228 7724 1301 7876]

Running Time: 304.45 seconds

Memory Usage: 0.04 GB



Classifier: Random Forest

Genomic Information Dataset – GDS968_full_NoFeature.csv

```

Run: 1, Selected Features = 48, AUC-ROC = 88.40%, Accuracy = 67.85%
Run: 2, Selected Features = 50, AUC-ROC = 87.73%, Accuracy = 67.76%
Run: 3, Selected Features = 44, AUC-ROC = 89.10%, Accuracy = 66.05%
Run: 4, Selected Features = 45, AUC-ROC = 85.94%, Accuracy = 64.32%
Run: 5, Selected Features = 46, AUC-ROC = 88.60%, Accuracy = 67.88%
Run: 6, Selected Features = 48, AUC-ROC = 91.36%, Accuracy = 68.97%
Run: 7, Selected Features = 49, AUC-ROC = 89.49%, Accuracy = 67.28%
Run: 8, Selected Features = 44, AUC-ROC = 85.73%, Accuracy = 64.39%
Run: 9, Selected Features = 43, AUC-ROC = 89.53%, Accuracy = 70.82%
Run: 10, Selected Features = 49, AUC-ROC = 85.83%, Accuracy = 64.30%

```

Selected Features (mean) = 46.60

AUC-ROC (mean) = 88.17

AUC-ROC (original) = 99.09

Selected Features (mean, Accuracy) = 46.60

Accuracy (mean) = 66.96

Accuracy (original) = 92.42

Standard Deviation of Selected Features (AUC) = 2.37

Standard Deviation of AUC-ROC = 1.78

Standard Deviation of Selected Features (Accuracy) = 4.72

Standard Deviation of Accuracy = 2.07

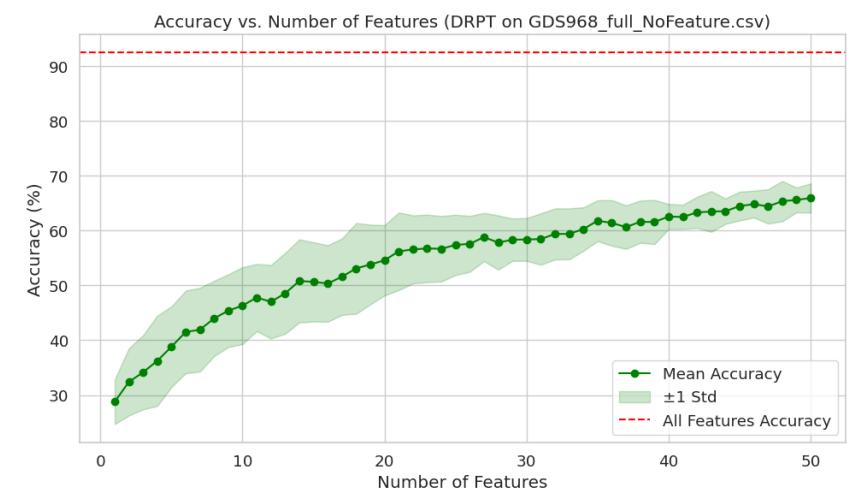
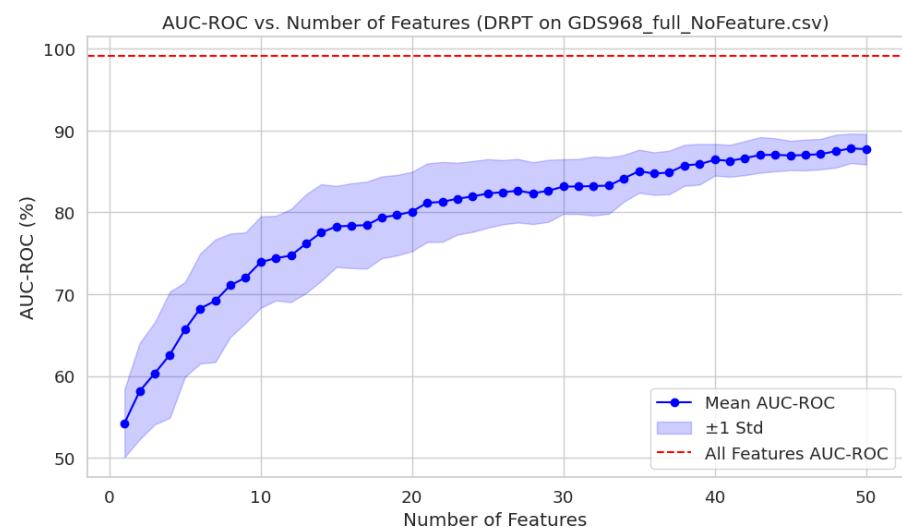
```

Optimal subset = [6409 5138 6851 7550 7534 90 4295 4242 4533 6006 4641 8169 7705 1967
4273 3767 6000 5336 164 6813 4653 3048 3452 5734 4627 2699 1832 2724
970 5495 3446 7353 4614 2479 7569 4987 1943 124 4860 1325 3003 5409
3193 1228 7724 1301 7876 5334]

```

Running Time: 85.35 seconds

Memory Usage: 0.04 GB



Classifier: Logistic Regression

Genomic Information Dataset – GDS968 full NoFeature.csv

```
Run: 1, Selected Features = 47, AUC-ROC = 82.59%, Accuracy = 58.50%
Run: 2, Selected Features = 50, AUC-ROC = 81.47%, Accuracy = 59.06%
Run: 3, Selected Features = 49, AUC-ROC = 80.64%, Accuracy = 53.28%
Run: 4, Selected Features = 49, AUC-ROC = 84.02%, Accuracy = 54.99%
Run: 5, Selected Features = 50, AUC-ROC = 83.12%, Accuracy = 55.51%
Run: 6, Selected Features = 49, AUC-ROC = 88.49%, Accuracy = 63.75%
Run: 7, Selected Features = 49, AUC-ROC = 86.13%, Accuracy = 64.34%
Run: 8, Selected Features = 45, AUC-ROC = 80.32%, Accuracy = 57.33%
Run: 9, Selected Features = 42, AUC-ROC = 85.35%, Accuracy = 62.57%
Run: 10, Selected Features = 45, AUC-ROC = 85.25%, Accuracy = 59.13%
```

Selected Features (mean) = 47.50

AUC-ROC (mean) = 83.74

AUC-ROC (original) = 93.43

Selected Features (mean, Accuracy) = 43.90

Accuracy (mean) = 58.85

Accuracy (original) = 66.69

Standard Deviation of Selected Features (AUC) = 2.54

Standard Deviation of AUC-ROC = 2.48

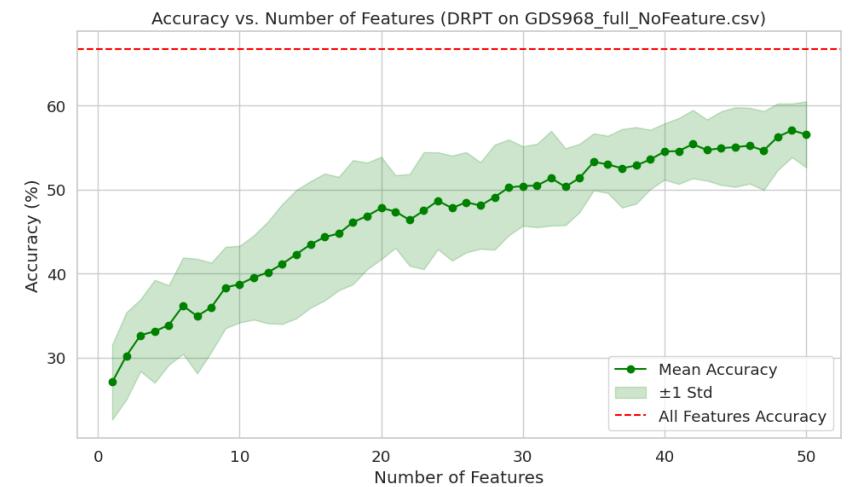
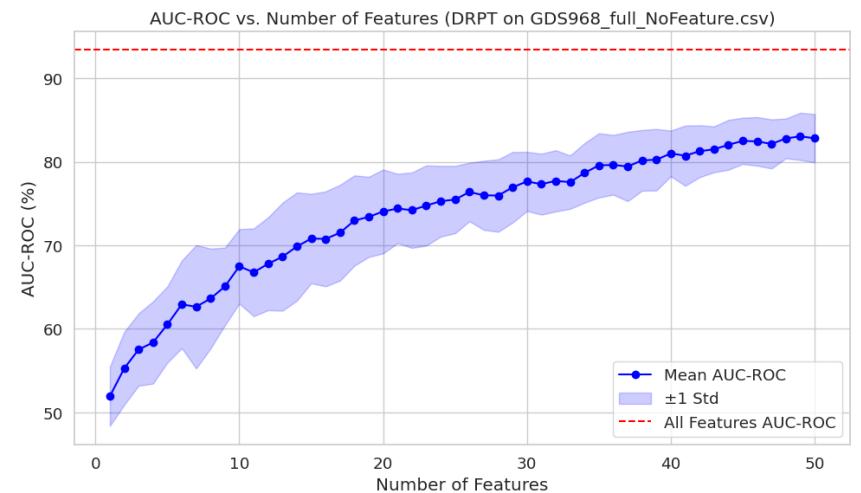
Standard Deviation of Selected Features (Accuracy) = 7.44

Standard Deviation of Accuracy = 3.57

```
Optimal subset = [6409 5138 6851 7550 7534 90 4295 4242 4533 6006 4641 8169 7705 1967
4273 3767 6000 5336 164 6813 4653 3048 3452 5734 4627 2699 1832 2724
970 5495 3446 7353 4614 2479 7569 4987 1943 124 4860 1325 3003 5409
3193 1228 7724 1301 7876 5334 3702]
```

Running Time: 34.27 seconds

Memory Usage: 0.04 GB



Classifier: KNN

Genomic Information Dataset – GDS968_full_NoFeature.csv

```
Run: 1, Selected Features = 17, AUC-ROC = 67.84%, Accuracy = 51.98%
Run: 2, Selected Features = 47, AUC-ROC = 62.27%, Accuracy = 43.28%
Run: 3, Selected Features = 39, AUC-ROC = 66.94%, Accuracy = 50.30%
Run: 4, Selected Features = 43, AUC-ROC = 69.75%, Accuracy = 54.45%
Run: 5, Selected Features = 34, AUC-ROC = 72.82%, Accuracy = 59.01%
Run: 6, Selected Features = 38, AUC-ROC = 68.05%, Accuracy = 52.03%
Run: 7, Selected Features = 35, AUC-ROC = 69.37%, Accuracy = 54.37%
Run: 8, Selected Features = 25, AUC-ROC = 65.35%, Accuracy = 47.98%
Run: 9, Selected Features = 48, AUC-ROC = 69.56%, Accuracy = 54.35%
Run: 10, Selected Features = 47, AUC-ROC = 65.59%, Accuracy = 48.47%
```

Selected Features (mean) = 37.30

AUC-ROC (mean) = 67.75

AUC-ROC (original) = 69.96

Selected Features (mean, Accuracy) = 37.30

Accuracy (mean) = 51.62

Accuracy (original) = 55.01

Standard Deviation of Selected Features (AUC) = 9.58

Standard Deviation of AUC-ROC = 2.77

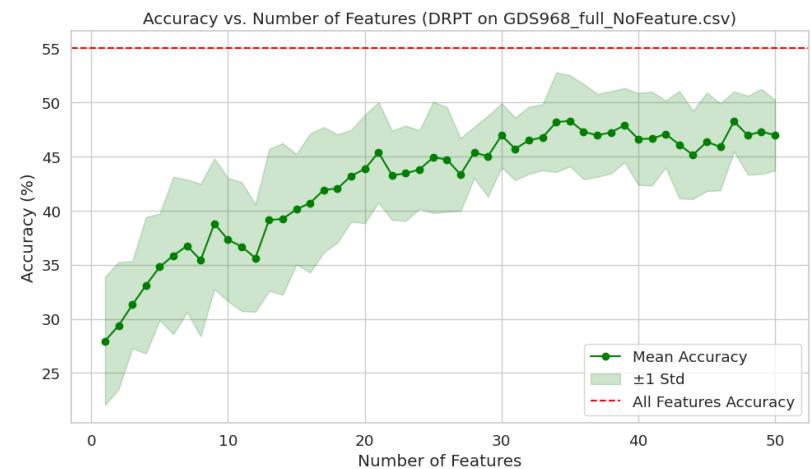
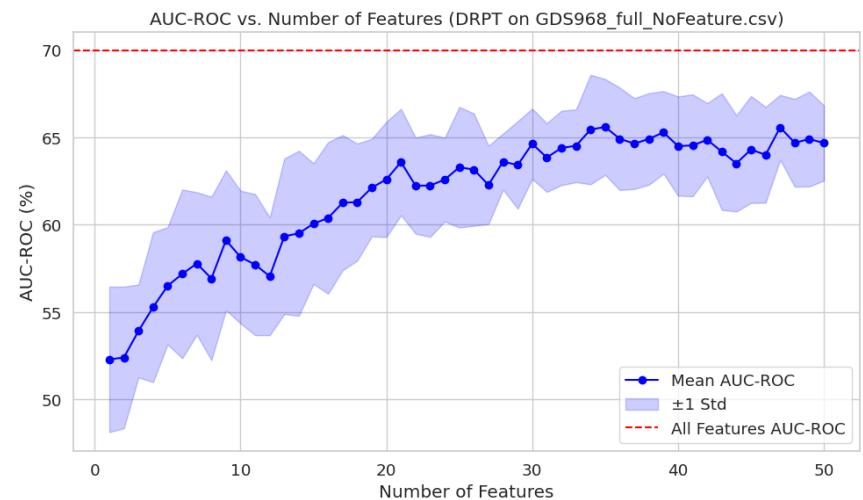
Standard Deviation of Selected Features (Accuracy) = 9.58

Standard Deviation of Accuracy = 4.15

```
Optimal subset = [5313 4981 7245 7547 1899 5851 5330 6438 8778 1406 2641 3022 4972 90
2293 6834 1825 7972 6704 8169 7230 6503 7184 4689 7987 8547 2602 3554
6153 3412 230 4860 3555 4128]
```

Running Time: 49.41 seconds

Memory Usage: 0.04 GB



Classifier: Decision Tree

Genomic Information Dataset – GDS531_full_NoFeature.csv

```
Run: 1, Selected Features = 34, AUC-ROC = 87.27%, Accuracy = 81.48%
Run: 2, Selected Features = 46, AUC-ROC = 84.94%, Accuracy = 80.92%
Run: 3, Selected Features = 50, AUC-ROC = 81.30%, Accuracy = 80.92%
Run: 4, Selected Features = 50, AUC-ROC = 85.89%, Accuracy = 84.40%
Run: 5, Selected Features = 50, AUC-ROC = 85.10%, Accuracy = 81.53%
Run: 6, Selected Features = 41, AUC-ROC = 81.50%, Accuracy = 82.08%
Run: 7, Selected Features = 46, AUC-ROC = 87.60%, Accuracy = 81.50%
Run: 8, Selected Features = 47, AUC-ROC = 86.06%, Accuracy = 83.24%
Run: 9, Selected Features = 43, AUC-ROC = 89.71%, Accuracy = 83.82%
Run: 10, Selected Features = 49, AUC-ROC = 83.84%, Accuracy = 82.67%
```

Selected Features (mean) = 45.60

AUC-ROC (mean) = 85.32

AUC-ROC (original) = 76.99

Selected Features (mean, Accuracy) = 30.40

Accuracy (mean) = 82.26

Accuracy (original) = 79.19

Standard Deviation of Selected Features (AUC) = 4.84

Standard Deviation of AUC-ROC = 2.50

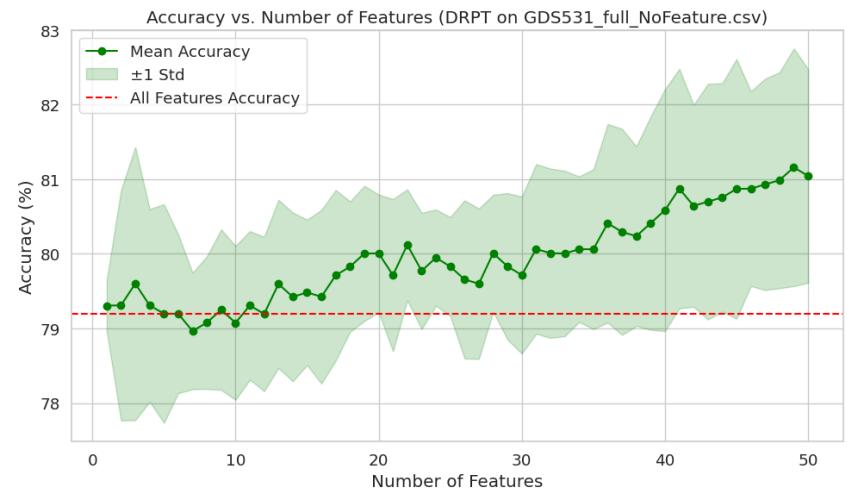
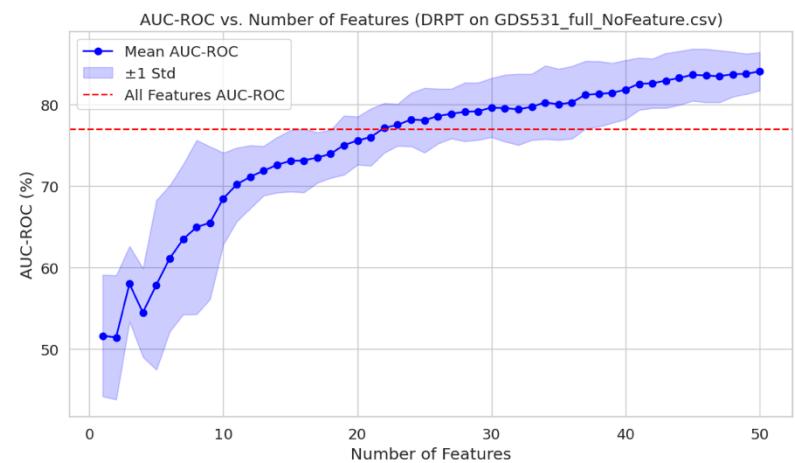
Standard Deviation of Selected Features (Accuracy) = 19.28

Standard Deviation of Accuracy = 1.16

Optimal subset = [6141 8181 2902 5164 4239 9243 5172 7538 4634 8672 1880 4620 8663 119
4873 3154 7867 4124 4533 3123 7530 6997 8168 8992 8541 8425 4658 7397
431 4047 835 100 2828 4704 2367 1570 7510 4060 3987 8638 4513 7387
8826]

Running Time: 48.60 seconds

Memory Usage: 0.05 GB



Classifier: SVM

Genomic Information Dataset – GDS531_full_NoFeature.csv

```
Run: 1, Selected Features = 37, AUC-ROC = 81.96%, Accuracy = 83.24%
Run: 2, Selected Features = 45, AUC-ROC = 82.51%, Accuracy = 83.24%
Run: 3, Selected Features = 49, AUC-ROC = 77.01%, Accuracy = 83.83%
Run: 4, Selected Features = 50, AUC-ROC = 84.88%, Accuracy = 86.12%
Run: 5, Selected Features = 49, AUC-ROC = 81.62%, Accuracy = 83.23%
Run: 6, Selected Features = 31, AUC-ROC = 74.23%, Accuracy = 82.62%
Run: 7, Selected Features = 47, AUC-ROC = 83.80%, Accuracy = 82.10%
Run: 8, Selected Features = 44, AUC-ROC = 79.00%, Accuracy = 83.23%
Run: 9, Selected Features = 35, AUC-ROC = 84.26%, Accuracy = 83.24%
Run: 10, Selected Features = 48, AUC-ROC = 80.37%, Accuracy = 82.10%
```

Selected Features (mean) = 43.50

AUC-ROC (mean) = 80.96

AUC-ROC (original) = 65.32

Selected Features (mean, Accuracy) = 27.50

Accuracy (mean) = 83.30

Accuracy (original) = 79.76

Standard Deviation of Selected Features (AUC) = 6.39

Standard Deviation of AUC-ROC = 3.21

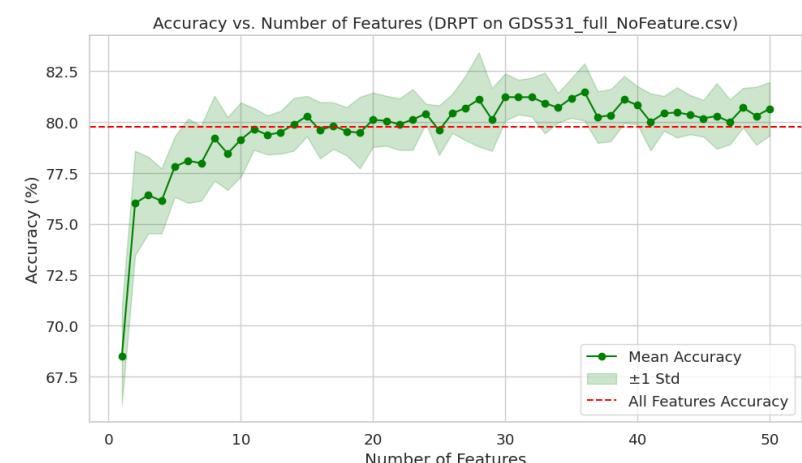
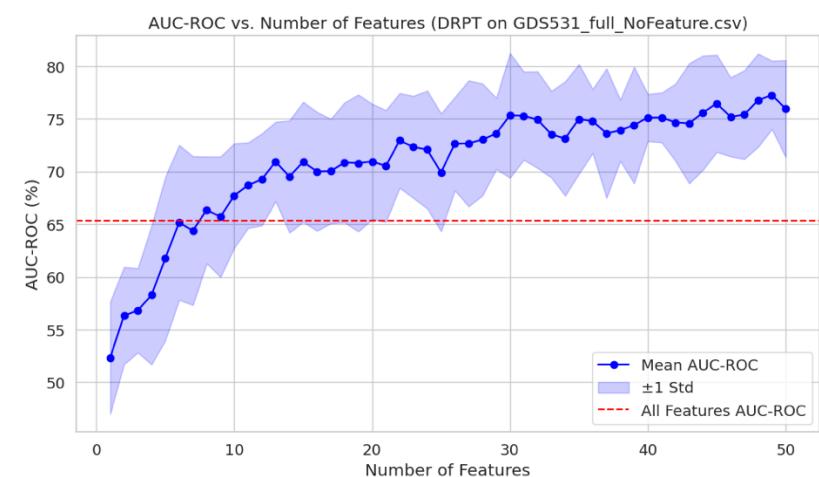
Standard Deviation of Selected Features (Accuracy) = 12.64

Standard Deviation of Accuracy = 1.08

```
Optimal subset = [7183 8642 7256 8672 8545 4881 5967 5293 8638 8309 7066 1136 2902 2735
8610 6313 7830 8400 4951 7910 4989 7397 2279 7390 3621 9011 6788 7029
3638 9096 8867 4077 5407 4271 6330 5634 4045 3121 6528 8734 2625 8670
1038 1239 8706 4332 1010 5342 1577 5897]
```

Running Time: 304.89 seconds

Memory Usage: 0.04 GB



Classifier: Random Forest

Genomic Information Dataset – GDS531_full_NoFeature.csv

```
Run: 1, Selected Features = 20, AUC-ROC = 78.43%, Accuracy = 82.64%
Run: 2, Selected Features = 45, AUC-ROC = 79.74%, Accuracy = 83.26%
Run: 3, Selected Features = 30, AUC-ROC = 74.76%, Accuracy = 81.51%
Run: 4, Selected Features = 41, AUC-ROC = 82.04%, Accuracy = 84.32%
Run: 5, Selected Features = 17, AUC-ROC = 80.23%, Accuracy = 84.97%
Run: 6, Selected Features = 27, AUC-ROC = 78.67%, Accuracy = 83.73%
Run: 7, Selected Features = 47, AUC-ROC = 81.87%, Accuracy = 90.24%
Run: 8, Selected Features = 47, AUC-ROC = 80.75%, Accuracy = 85.50%
Run: 9, Selected Features = 43, AUC-ROC = 89.00%, Accuracy = 87.80%
Run: 10, Selected Features = 48, AUC-ROC = 84.00%, Accuracy = 84.92%
```

Selected Features (mean) = 36.50

AUC-ROC (mean) = 80.95

AUC-ROC (original) = 76.23

Selected Features (mean, Accuracy) = 34.70

Accuracy (mean) = 84.89

Accuracy (original) = 80.35

Standard Deviation of Selected Features (AUC) = 11.28

Standard Deviation of AUC-ROC = 3.58

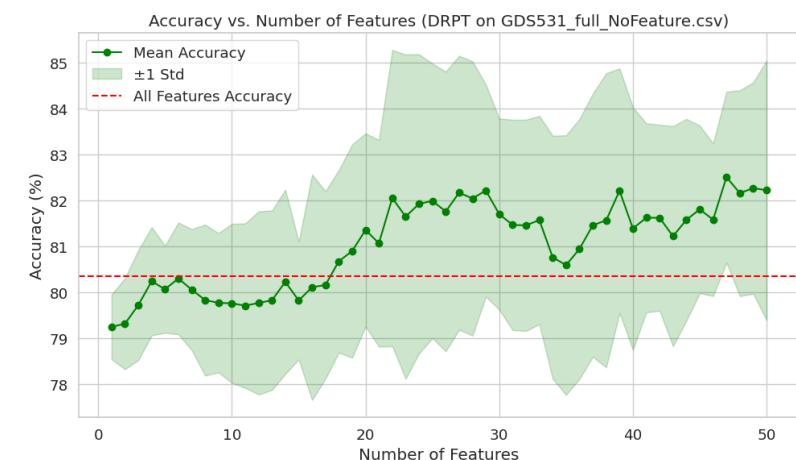
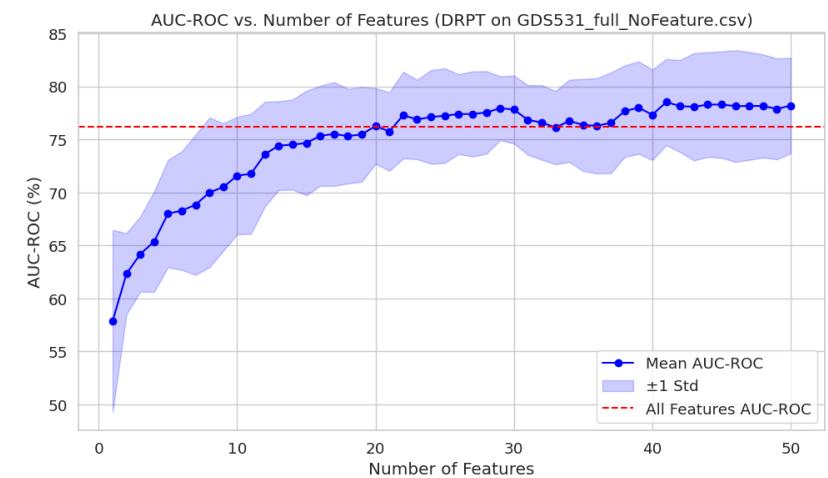
Standard Deviation of Selected Features (Accuracy) = 11.80

Standard Deviation of Accuracy = 2.41

```
Optimal subset = [6141 8181 2902 5164 4239 9243 5172 7538 4634 8672 1880 4620 8663 119
 4873 3154 7867 4124 4533 3123 7530 6997 8168 8992 8541 8425 4658 7397
 431 4047 835 100 2828 4704 2367 1570 7510 4060 3987 8638 4513 7387
 8826]
```

Running Time: 62.38 seconds

Memory Usage: 0.05 GB



Classifier: Logistic Regression

Genomic Information Dataset – GDS531_full_NoFeature.csv

```
Run: 1, Selected Features = 31, AUC-ROC = 78.60%, Accuracy = 86.08%
Run: 2, Selected Features = 5, AUC-ROC = 75.04%, Accuracy = 81.43%
Run: 3, Selected Features = 45, AUC-ROC = 72.92%, Accuracy = 82.08%
Run: 4, Selected Features = 13, AUC-ROC = 75.77%, Accuracy = 84.97%
Run: 5, Selected Features = 24, AUC-ROC = 73.09%, Accuracy = 82.66%
Run: 6, Selected Features = 20, AUC-ROC = 76.71%, Accuracy = 83.19%
Run: 7, Selected Features = 33, AUC-ROC = 77.04%, Accuracy = 83.28%
Run: 8, Selected Features = 41, AUC-ROC = 74.72%, Accuracy = 84.99%
Run: 9, Selected Features = 46, AUC-ROC = 82.79%, Accuracy = 83.21%
Run: 10, Selected Features = 14, AUC-ROC = 74.93%, Accuracy = 82.69%
```

Selected Features (mean) = 27.20

AUC-ROC (mean) = 76.16

AUC-ROC (original) = 63.60

Selected Features (mean, Accuracy) = 28.90

Accuracy (mean) = 83.46

Accuracy (original) = 80.34

Standard Deviation of Selected Features (AUC) = 13.56

Standard Deviation of AUC-ROC = 2.76

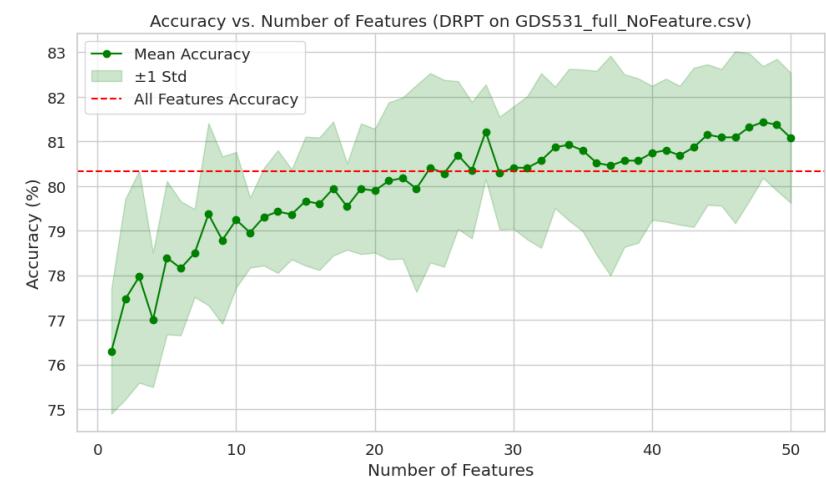
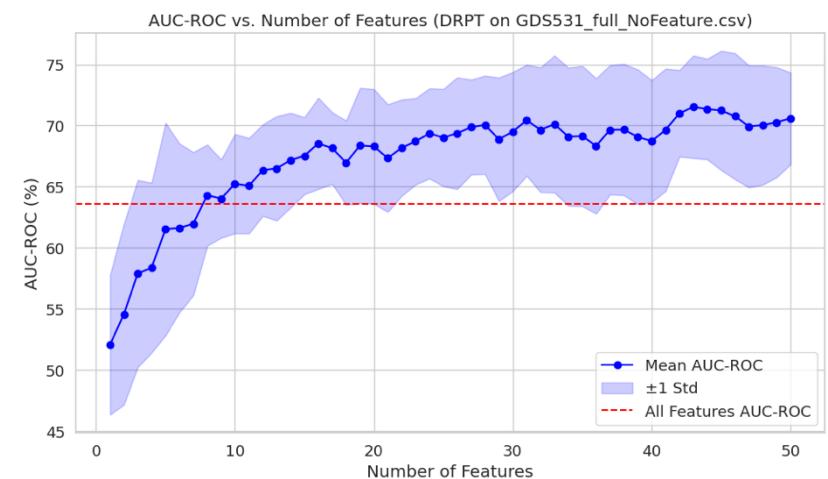
Standard Deviation of Selected Features (Accuracy) = 15.37

Standard Deviation of Accuracy = 1.38

Optimal subset = [6141 8181 2902 5164 4239 9243 5172 7538 4634 8672 1880 4620 8663 119
4873 3154 7867 4124 4533 3123 7530 6997 8168 8992 8541 8425 4658 7397
431 4047 835 100 2828 4704 2367 1570 7510 4060 3987 8638 4513 7387
8826 6009 6858 5682]

Running Time: 30.28 seconds

Memory Usage: 0.03 GB



Classifier: KNN

Genomic Information Dataset – GDS531_full_NoFeature.csv

```
Run: 1, Selected Features = 18, AUC-ROC = 67.57%, Accuracy = 79.19%
Run: 2, Selected Features = 25, AUC-ROC = 63.55%, Accuracy = 76.32%
Run: 3, Selected Features = 50, AUC-ROC = 60.85%, Accuracy = 75.11%
Run: 4, Selected Features = 20, AUC-ROC = 60.67%, Accuracy = 75.70%
Run: 5, Selected Features = 38, AUC-ROC = 65.60%, Accuracy = 79.24%
Run: 6, Selected Features = 25, AUC-ROC = 69.29%, Accuracy = 78.66%
Run: 7, Selected Features = 29, AUC-ROC = 63.97%, Accuracy = 76.35%
Run: 8, Selected Features = 18, AUC-ROC = 65.13%, Accuracy = 78.02%
Run: 9, Selected Features = 35, AUC-ROC = 67.80%, Accuracy = 76.84%
Run: 10, Selected Features = 22, AUC-ROC = 63.22%, Accuracy = 76.29%
```

Selected Features (mean) = 28.00

AUC-ROC (mean) = 64.77

AUC-ROC (original) = 54.27

Selected Features (mean, Accuracy) = 30.20

Accuracy (mean) = 77.17

Accuracy (original) = 69.31

Standard Deviation of Selected Features (AUC) = 9.76

Standard Deviation of AUC-ROC = 2.74

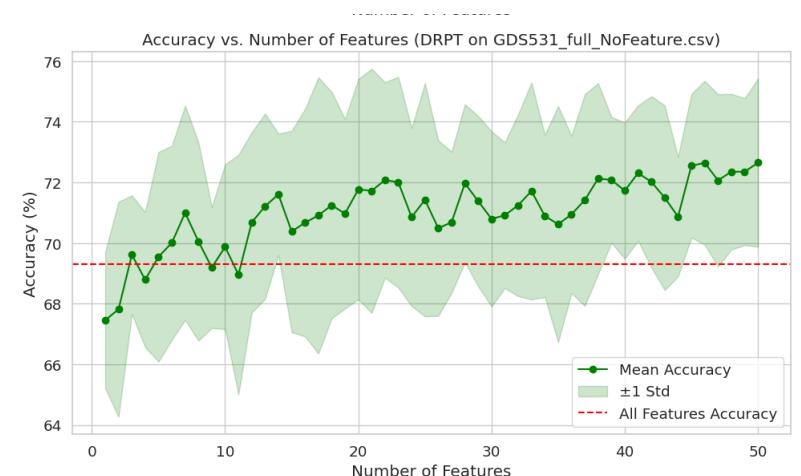
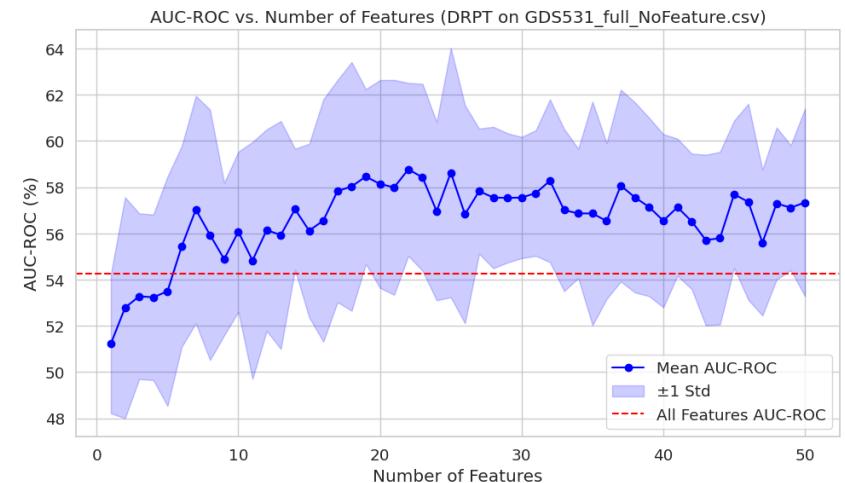
Standard Deviation of Selected Features (Accuracy) = 11.06

Standard Deviation of Accuracy = 1.41

Optimal subset = [7009 6997 3503 5715 3505 2482 2016 6498 5351 1086 4675 6396 3512 1353
4084 4402 3495 4414 6052 461 4515 5499 3110 3067 6770]

Running Time: 51.11 seconds

Memory Usage: 0.04 GB



Classifier: Decision Tree

