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==== Training Random Forest Models for Each Dataset ====

◆ Training on NSLKDD dataset...

✓ NSLKDD dataset limited to 100000 rows.

Class distribution in training set: {0: 35114, 1: 34886}

🎯 Random Forest Accuracy for NSLKDD: 0.9957

	precision	recall	f1-score	support
0	1.00	1.00	1.00	14887
1	1.00	1.00	1.00	15113
accuracy			1.00	30000
macro avg	1.00	1.00	1.00	30000
weighted avg	1.00	1.00	1.00	30000

◆ Training on UNSW\_NB15 dataset...

✓ UNSW\_NB15 dataset limited to 100000 rows.

Class distribution in training set: {0: 25278, 1: 44722}

🎯 Random Forest Accuracy for UNSW\_NB15: 1.0000

	precision	recall	f1-score	support
0	1.00	1.00	1.00	10805
1	1.00	1.00	1.00	19195
accuracy			1.00	30000
macro avg	1.00	1.00	1.00	30000
weighted avg	1.00	1.00	1.00	30000

◆ Training on KDDCup dataset...

✓ KDDCup dataset limited to 100000 rows.

Class distribution in training set: {0: 32, 1: 1, 3: 176, 4: 2, 5: 2, 6: 8724, 7: 48, 8: 14918, 10: 134, 11: 360, 12: 45577, 13: 8, 14: 18}

🎯 Random Forest Accuracy for KDDCup: 0.9994

	precision	recall	f1-score	support
0	1.00	0.95	0.98	21
1	1.00	0.00	0.00	1
2	1.00	0.00	0.00	1
3	1.00	0.96	0.98	84
6	1.00	1.00	1.00	3795
7	0.92	0.88	0.90	26
8	1.00	1.00	1.00	6384
9	1.00	0.00	0.00	1
10	1.00	0.97	0.99	73

11	1.00	0.99	1.00	135
12	1.00	1.00	1.00	19466
13	1.00	1.00	1.00	1
14	1.00	0.50	0.67	12
accuracy			1.00	30000
macro avg	0.99	0.71	0.73	30000
weighted avg	1.00	1.00	1.00	30000

◆ Training on CICIDS2017 dataset...

✓ CICIDS2017 dataset limited to 100000 rows.

Class distribution in training set: {0: 70000}

🎯 Random Forest Accuracy for CICIDS2017: 1.0000

	precision	recall	f1-score	support
0	1.00	1.00	1.00	30000
accuracy			1.00	30000
macro avg	1.00	1.00	1.00	30000
weighted avg	1.00	1.00	1.00	30000