

Table S1. Comparison of CNN models using dataset 3 with respect to accuracy, RMSE, weighted kappa (with standard deviation).

CNN Model	Epochs	70%-30% distribution			10-fold cross-validation		
		Accuracy (%)	RMSE	Weighted Kappa	Accuracy (%)	RMSE	Weighted Kappa
VGG-19	10	83.34	0.2696	0.8199	85.64	0.2466	0.8429
		(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.03)
	20	84.65	0.2565	0.8330	86.12	0.2418	0.8477
		(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.03)
	30	88.52	0.2178	0.8717	88.32	0.2198	0.8697
		(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.03)
ResNet-50	10	92.39	0.1791	0.9104	93.25	0.1705	0.9190
		(± 0.05)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.04)
	20	93.47	0.1683	0.9212	94.13	0.1617	0.9278
		(± 0.04)	(± 0.05)	(± 0.04)	(± 0.05)	(± 0.04)	(± 0.03)
	30	93.89	0.1641	0.9254	95.54	0.1276	0.9619
		(± 0.04)	(± 0.06)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.04)
Inception-V3	10	94.52	0.1578	0.9317	97.39	0.1291	0.9604
		(± 0.04)	(± 0.04)	(± 0.03)	(± 0.03)	(± 0.04)	(± 0.03)
	20	95.24	0.1506	0.9389	98.54	0.1176	0.9719
		(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.03)
	30	95.37	0.1493	0.9402	98.62	0.1168	0.9727
		(± 0.05)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.03)

Table S2. Comparison of CNN models using dataset 3 with respect to TP-Rate/Recall, FP-Rate, F-measure (with standard deviation).

CNN Model	Epochs	70%-30% distribution				10-fold cross-validation			
		TP-Rate / Recall (%)	FP-Rate (%)	Precision (%)	F-measure (%)	TP-Rate / Recall (%)	FP-Rate (%)	Precision (%)	F-measure (%)
VGG-19	10	82.99	16.66	82.95	82.97	85.29	14.36	85.25	85.27
		(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
	20	84.30	15.35	84.26	84.28	85.77	13.88	85.73	85.75
		(± 0.05)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
	30	88.17	11.48	88.13	88.15	87.97	11.68	87.93	87.95
		(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
ResNet-50	10	92.04	7.61	92.00	92.02	92.90	6.75	92.86	92.88
		(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
	20	93.12	6.53	93.08	93.10	93.78	5.87	93.74	93.76
		(± 0.05)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
	30	93.54	6.11	93.50	93.52	95.19	2.46	95.15	95.17
		(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
Inception-V3	10	94.17	5.48	94.13	94.15	97.04	2.61	97.00	97.02
		(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
	20	94.89	4.76	94.85	94.87	98.19	1.46	98.15	98.17
		(± 0.05)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)
	30	95.02	4.63	94.98	95.00	98.27	1.38	98.23	98.25
		(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)	(± 0.04)	(± 0.04)	(± 0.04)	(± 0.03)