

: Micro-averaged F_1 scores for the multinomial logistic regression (MLL), *GradFac*, *GradFac* with *Elastic-Net* regularization, One-vs-Rest models on benchmark datasets.

DATASET	# MODELS	MLL	GF	GFEN	OVR
3*WINE	30	0.949 \pm 0.047	0.948 \pm 0.041	0.931 \pm 0.051	0.945 \pm 0.085
	60	0.970 \pm 0.037	0.967 \pm 0.039	0.955 \pm 0.060	0.951 \pm 0.067
	90	0.975 \pm 0.037	0.969 \pm 0.046	0.955 \pm 0.060	0.955 \pm 0.069
3*LETTERS	3120	0.915 \pm 0.005	0.946 \pm 0.005	0.947 \pm 0.002	0.922 \pm 0.006
	6240	0.933 \pm 0.004	0.958 \pm 0.004	0.958 \pm 0.003	0.943 \pm 0.004
	9100	0.940 \pm 0.005	0.960 \pm 0.004	0.962 \pm 0.004	0.950 \pm 0.004
3*MNIST	1300	0.952 \pm 0.002	0.964 \pm 0.002	0.963 \pm 0.002	0.957 \pm 0.002
	2600	0.963 \pm 0.002	0.970 \pm 0.001	0.970 \pm 0.002	0.966 \pm 0.002
	4000	0.967 \pm 0.002	0.972 \pm 0.001	0.973 \pm 0.002	0.970 \pm 0.001
3*PENDIGITS	1300	0.988 \pm 0.003	0.991 \pm 0.004	0.992 \pm 0.003	0.990 \pm 0.003
	2600	0.990 \pm 0.003	0.992 \pm 0.004	0.993 \pm 0.003	0.991 \pm 0.002
	4000	0.991 \pm 0.003	0.992 \pm 0.003	0.993 \pm 0.003	0.992 \pm 0.002
3*SEGMENTATION	490	0.981 \pm 0.010	0.984 \pm 0.008	0.985 \pm 0.007	0.977 \pm 0.008
	1050	0.982 \pm 0.008	0.984 \pm 0.008	0.986 \pm 0.008	0.980 \pm 0.008
	1750	0.982 \pm 0.009	0.985 \pm 0.008	0.987 \pm 0.008	0.981 \pm 0.008

