

Supplementary Materials: Hyperparameter Configurations

Appendix A

Table 4 Hyperparameters of Rek-Surv

Hyperparameter	WHAS	METABRIC	RGBSG	SUPPORT	NWTCO
KAN Shape	[6,24,1]	[9,1,1]	[7,1,1]	[14,1]	[8,1]
Base Activation	ReLu	ReLu	ReLu	ReLu	ReLu
Learning Rate	0.001	0.001	0.001	0.001	0.001
Weight Decay	0.0001	0.0001	0.0001	0.0001	0.0001
L1 Regularization (λ_1)	0.1	0.1	0.1	0.1	0.1
L2 Regularization (λ_2)	0.5	0.5	0.5	0.5	0.5
Epoch	491	490	280	500	165
Grid Eps	0.01	0.01	0.01	0.01	0.1
Grid Range	[-5, 5]	[-1, 1]	[-1, 1]	[-1, 1]	[-1, 1]
Grid Size	300	1	7	3	4
Scale Base	2.0	1.0	1.5	1.0	2.0

Scale Noise	0.1	1	0.5	0.1	0.1
Scale Spline	2.0	1	1.5	1.0	1.5
Spline Order	4	3	3	1	3

Table 5 Hyperparameters of DeepSurv.

Hyperparameter	NWTCO
Shape	[6,9,1]
Early Stopping	False
Epochs	135
Learning Rate	0.008
Batch Norm	True
Dropout	0.12
Weight Decay(L2)	6.6e-8

Table 6 Hyperparameters of CoxKAN.

Hyperparameter	WHAS	METABRIC	RGBSG	SUPPORT	NWTCO
KAN Shape	[6,5,5,1]	[9,1]	[7,2,1]	[14,3,1]	[6,5,1]
Learning Rate	0.01	0.09	0.0076	0.015	0.002
Early Stopping	True	True	True	True	False
Steps	(300)	(300)	(300)	(300)	147
Prune threshold	0.047	0.035	0.045	0.00007	0.02
Grid Intervals	3	3	3	3	5
Base fn	silu	silu	silu	linear	linear
Spline noise	0.085	0.1	0.09	0.11	0.15
Base noise	0.16	0.03	0.18	0.05	0.16
Reg	0.003	0.003	0.0007	0.005	0.002

Entropy Reg	1	0	3	2	2
Coefficient Reg	2	4	2	4	2