

PASTIS Dataset - 2024-10-18

Dataset Description

- **Original source:** [Add source information here]
- **Sizes:** [Add size information here]
- **Image Type:** Gray
- **Date range covered:** [Add date range here]
- **Number of Images (and channels):** [Add number of images here]

Why did we choose it?

[Add reasons for choosing this dataset]

Cleaning - what did we do?

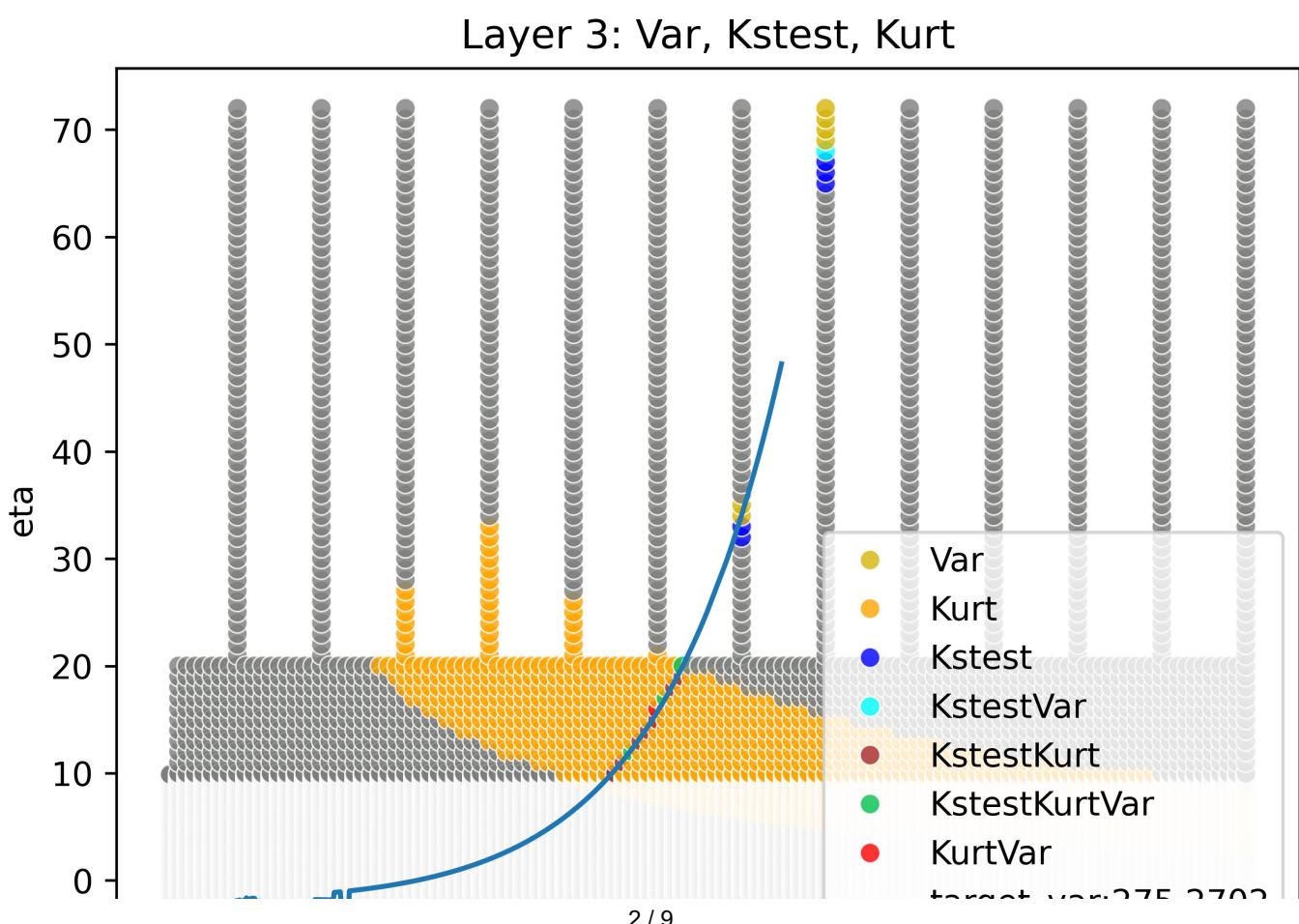
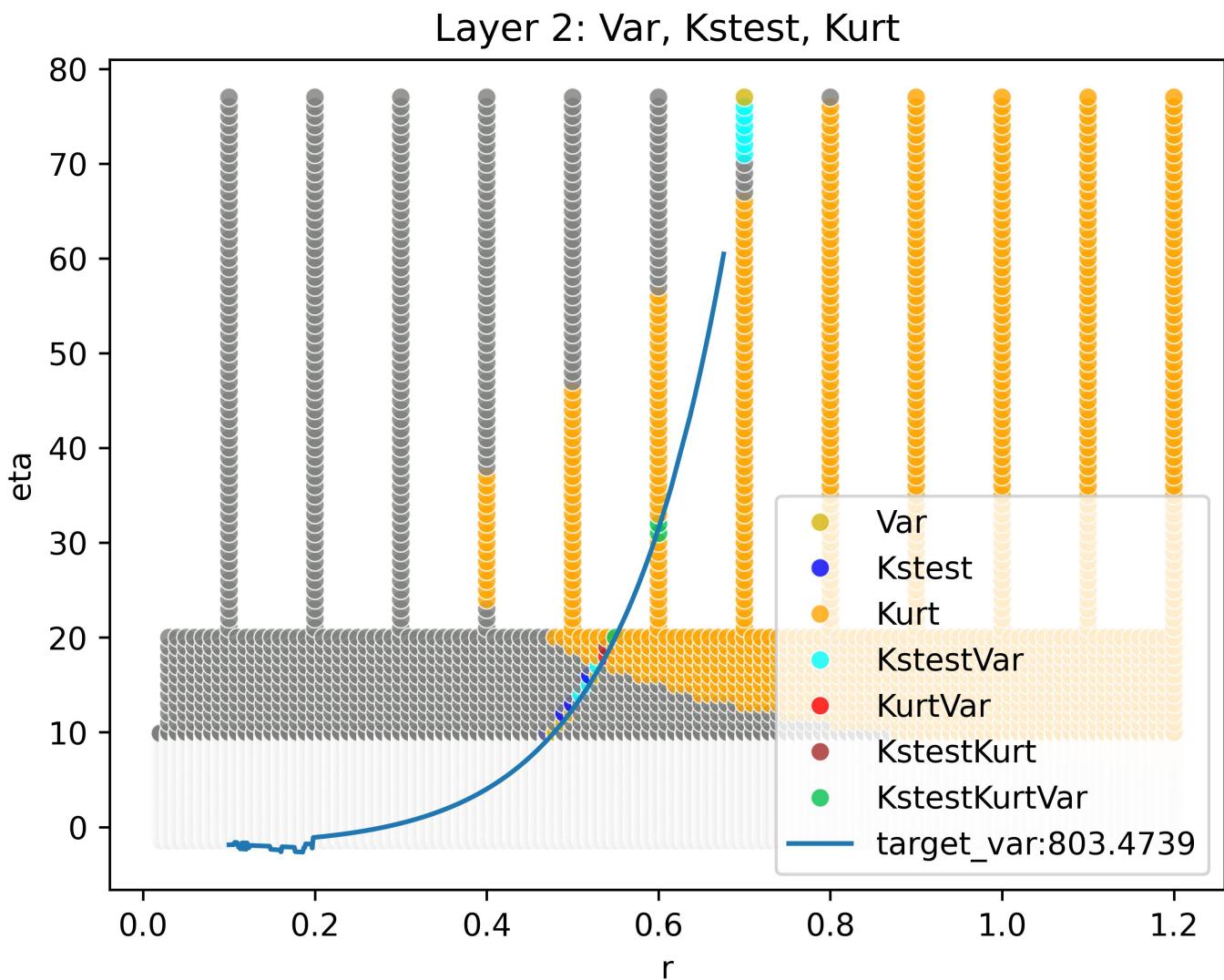
[Add cleaning process details]

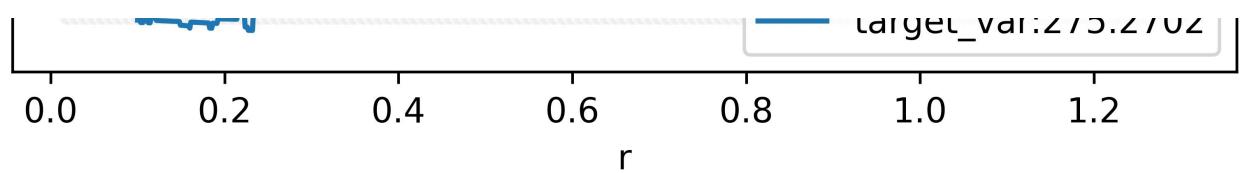
Hypotheses

[Add hypotheses, basis/representation used, and assumptions about signal subsets]

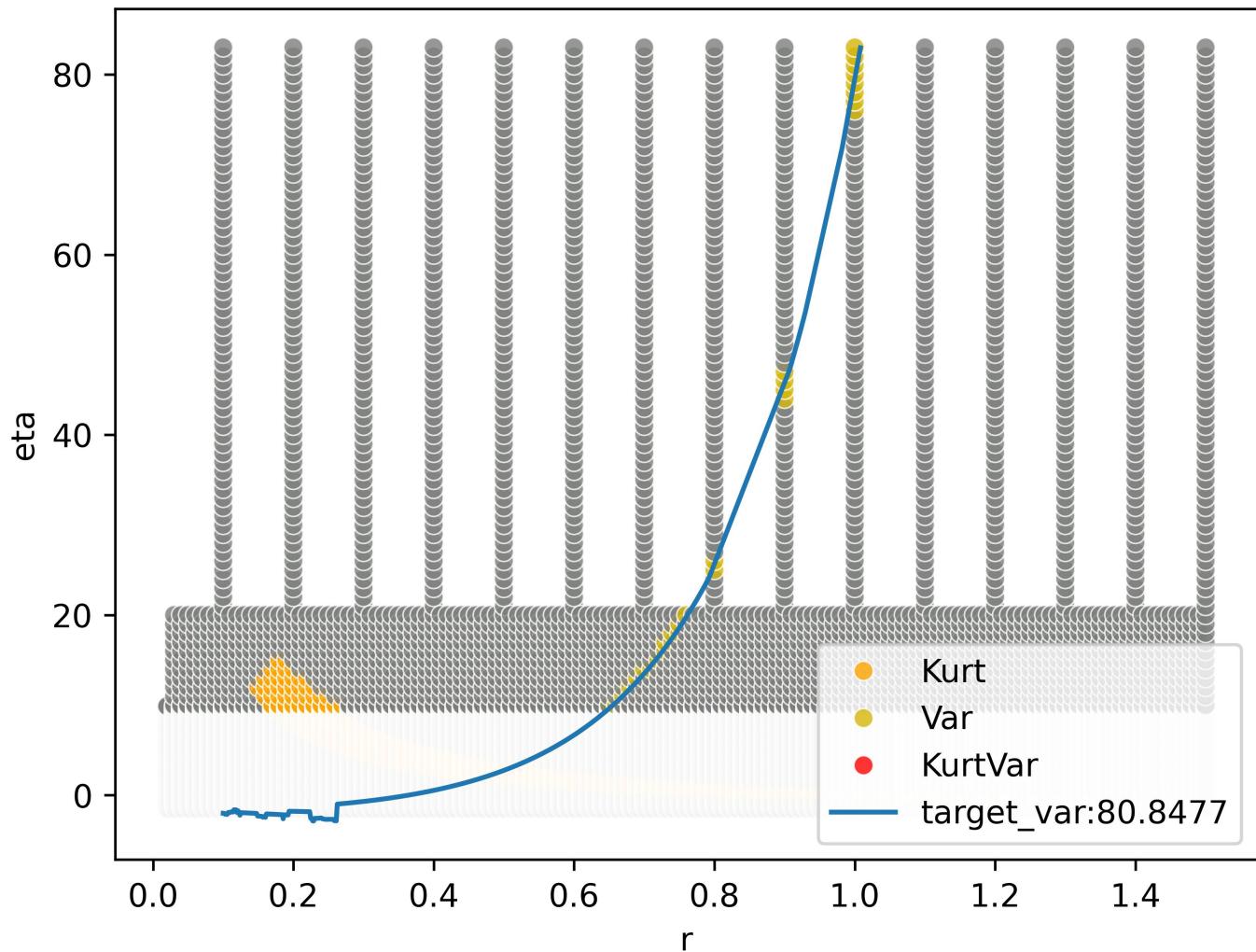
Tests and Questions

Full Grid Search Combo Plots

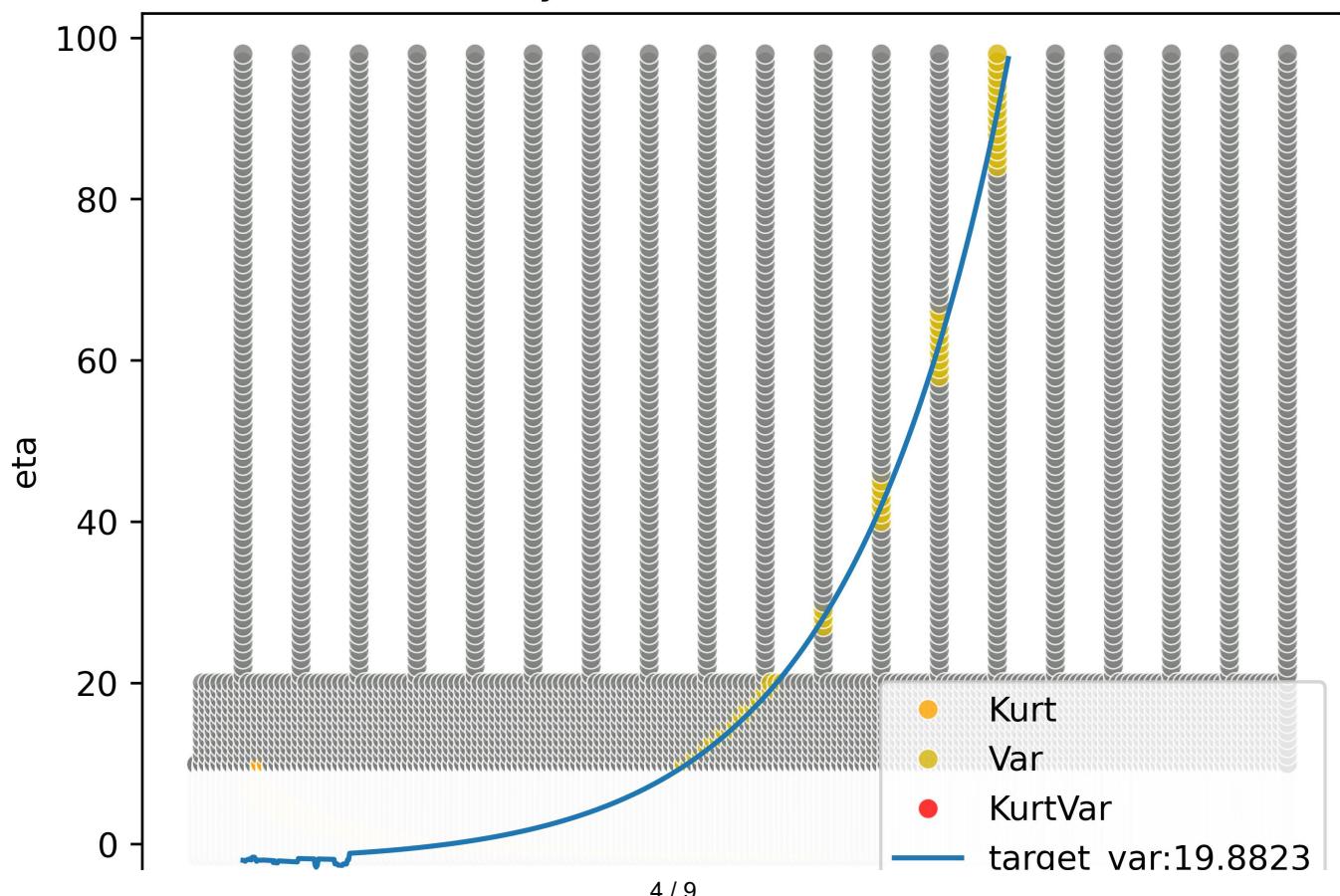


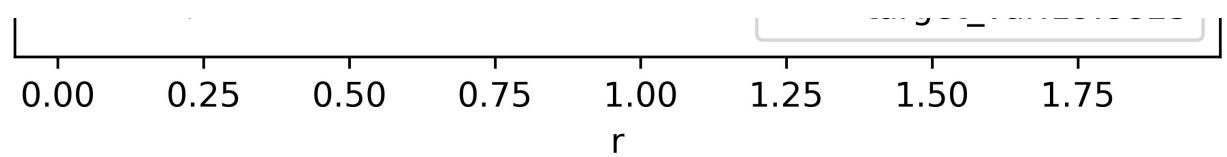


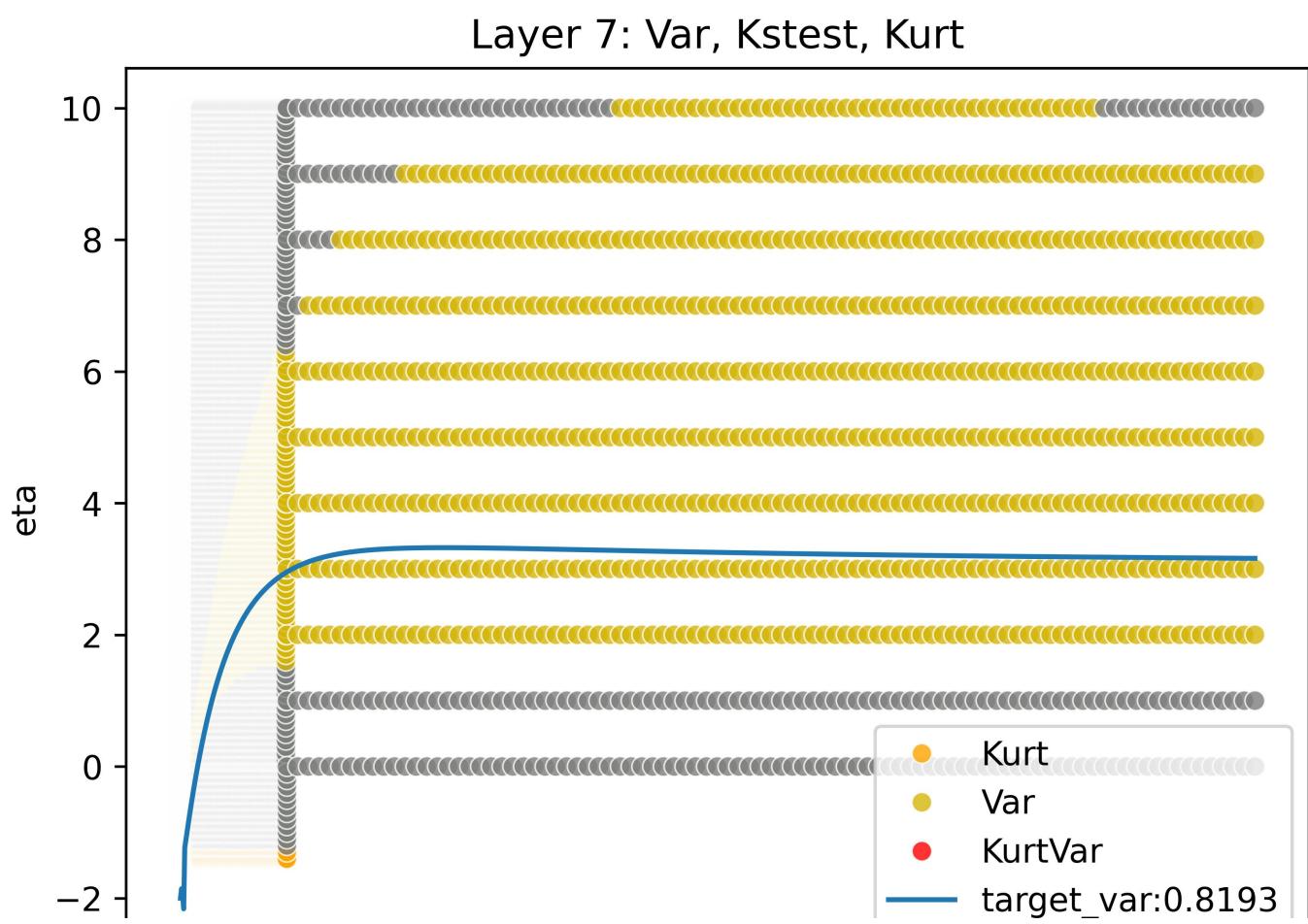
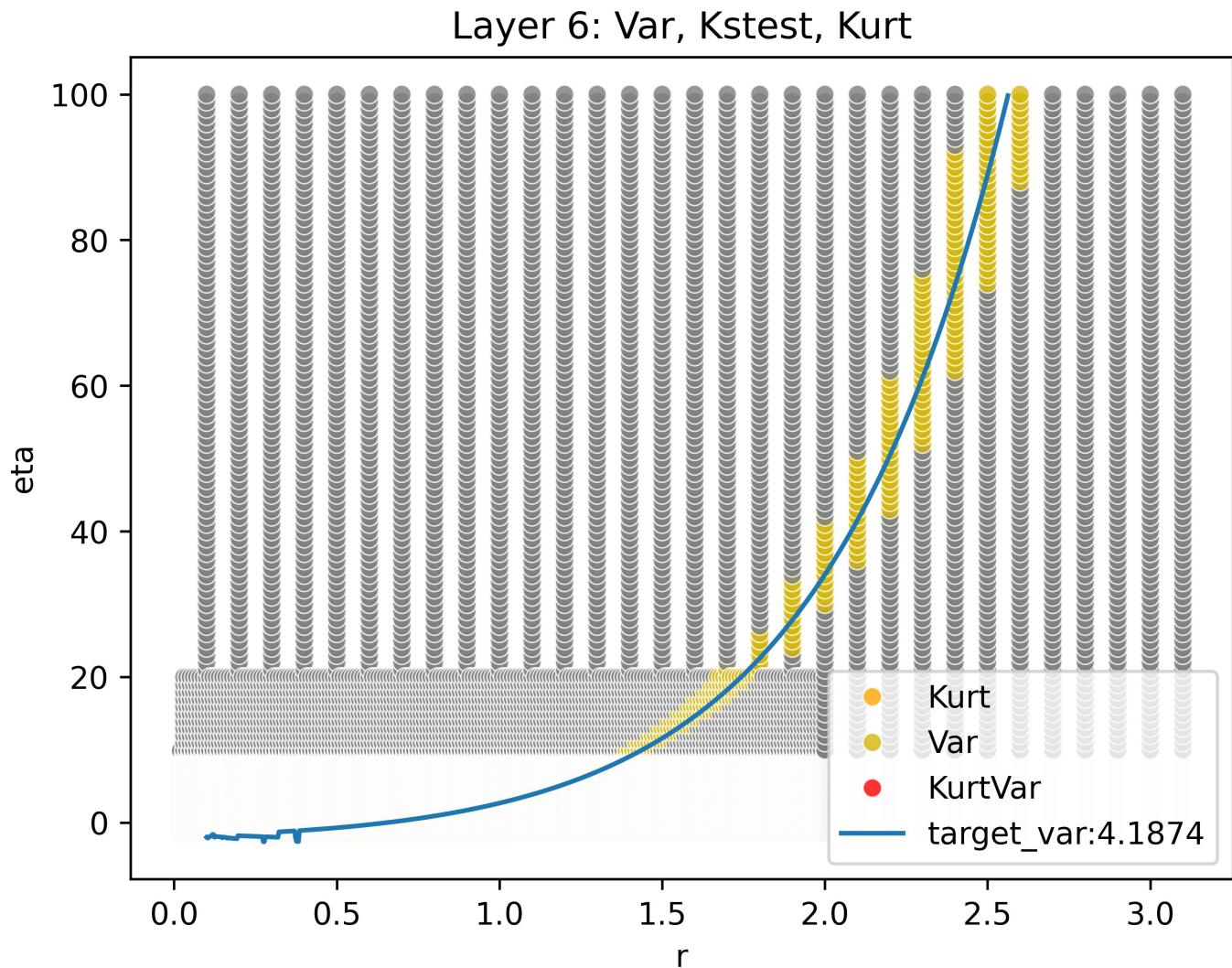
Layer 4: Var, Kstest, Kurt

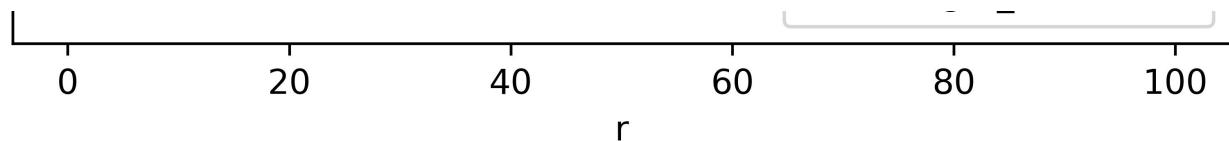


Layer 5: Var, Kstest, Kurt

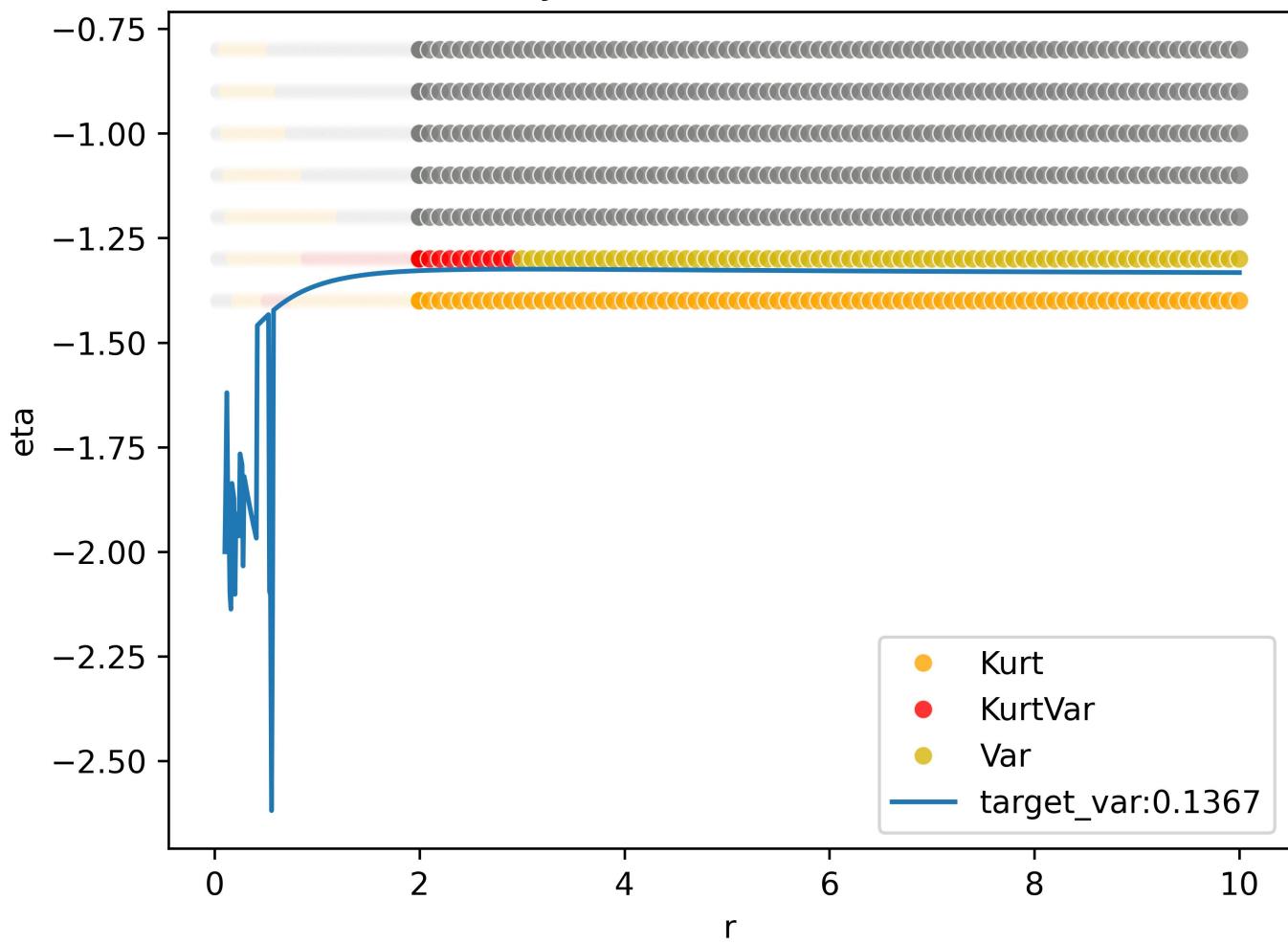




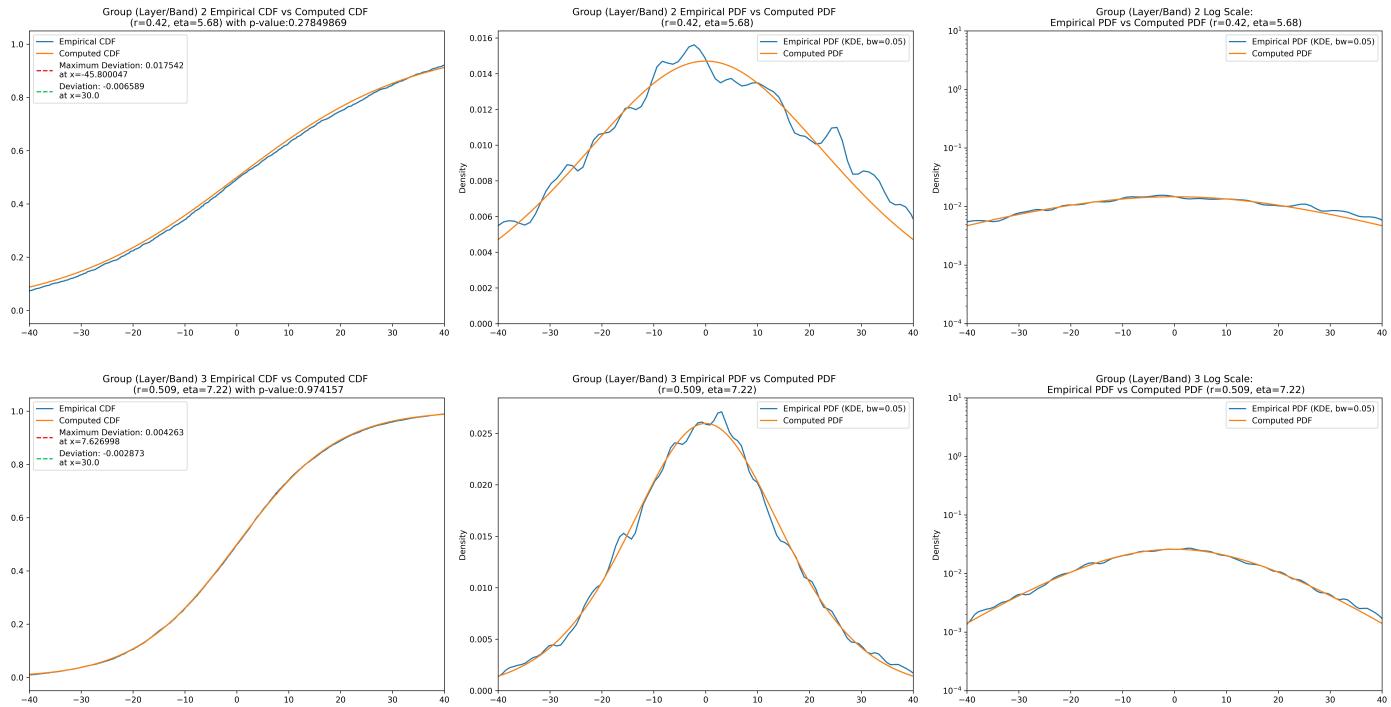


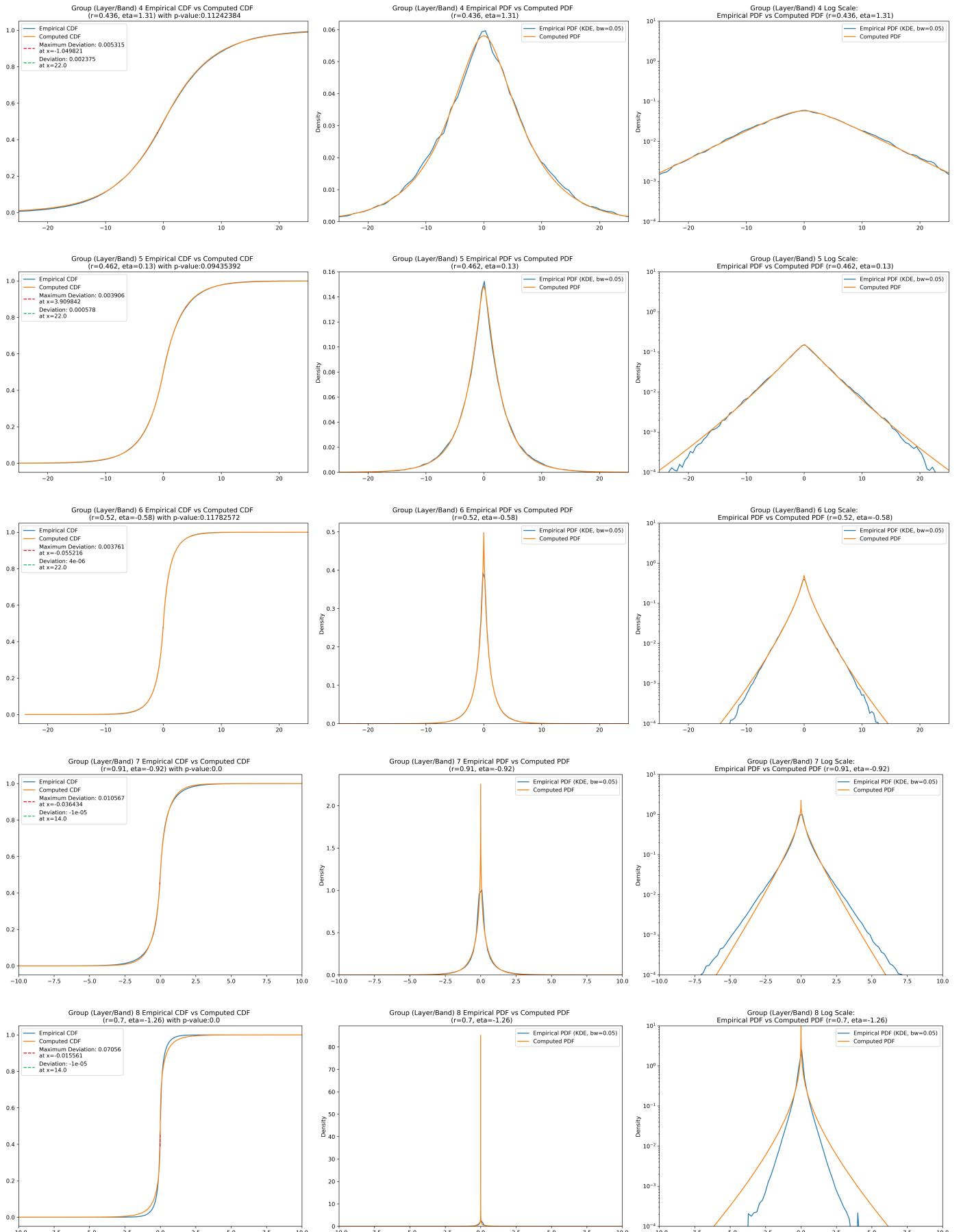


Layer 8: Var, Kstest, Kurt



Compare CDF PDF Plots





Results

Here are the best parameters from the proposed prior distribution:

layer	total_samples	best_r	best_eta	kstest_stat_best
2	3180	0.42	5.68	0.0175418

layer	total_samples	best_r	best_eta	kstest_stat_best
3	12720	0.509	7.22	0.00426327
4	50880	0.436	1.31	0.00531527
5	203520	0.462	0.13	0.00390606
6	814080	0.52	-0.58	0.00311
7	3.25632e+06	0.91	-0.92	0.00843243
8	1.30253e+07	0.7	-1.26	0.0355432

Here are the KS statistics along with the cutoff for a p-value of 0.05:

layer	total_samples	kstest_stat_initial	kstest_stat_cutoff_0.05	kstest_stat_eta0	kstest_stat_best	kstest_stat_gaussian	kstest_stat_laplace	kstest_
2	3180	0.018069	0.0240303	0.0603464	0.0175418	0.0195034	0.0363916	0.036
3	12720	0.0046148	0.0120285	0.0370116	0.00426327	0.010128	0.0226653	0.0226653
4	50880	0.00627036	0.00601756	0.0233191	0.00531527	0.0204744	0.0144979	0.0144979
5	203520	0.00523582	0.0030096	0.00565307	0.00390606	0.030178	0.00234437	0.010
6	814080	0.00434924	0.00150501	0.0205071	0.00311	0.0423748	0.0144807	0.0144807
7	3.25632e+06	0.0104128	0.000752555	0.0822836	0.00843243	0.0529285	0.0252819	0.0252819
8	1.30253e+07	0.0515196	0.00037629	0.227351	0.0355432	0.0563576	0.0291519	0.0291519

Major Take-aways

[Add major conclusions and insights]