

```
# ablation_results.csv
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run	layer	head	base_loss	ablated_loss	impact	pct_impact
control	3	0	3.226721155643463	3.2273649096488954	0.0006437540054324	0.0199507169780249
control	3	1	3.226721155643463	3.231786072254181	0.005064916107179	0.1569679053877812
control	3	2	3.226721155643463	3.236233925819397	0.0095127701759341	0.2948122790002007
control	3	3	3.226721155643463	3.228087615966797	0.001366460323334	0.0423482618243657
control	3	4	3.226721155643463	3.228150486946106	0.001429331302643	0.0442967096844774
control	3	5	3.226721155643463	3.229976391792297	0.0032552361488344	0.1008837142044691
control	3	6	3.226721155643463	3.2278519749641417	0.0011308193206787	0.0350454615113218
control	3	7	3.226721155643463	3.2268201231956484	9.896755218541388e-05	0.0030671244093194
control	6	0	3.226721155643463	3.229796051979065	0.0030748963356019	0.0952947647869745
control	6	1	3.226721155643463	3.228093945980072	0.0013727903366089	0.0425444366089085
control	6	2	3.226721155643463	3.229904496669769	0.0031833410263062	0.0986555972070487
control	6	3	3.226721155643463	3.2383657693862915	0.0116446137428285	0.3608806953294485
control	6	4	3.226721155643463	3.229016935825348	0.002295780181885	0.071149010749496
control	6	5	3.226721155643463	3.22837518453598	0.001654028892517	0.0512603603699758
control	6	6	3.226721155643463	3.232685005664825	0.0059638500213625	0.1848269414582642
control	6	7	3.226721155643463	3.235815143585205	0.0090939879417422	0.2818337099205807
control	9	0	3.226721155643463	3.236248278617859	0.0095271229743958	0.2952570896227929
control	9	1	3.226721155643463	3.232958722114563	0.0062375664710998	0.1933097460309047
control	9	2	3.226721155643463	3.229616701602936	0.0028955459594728	0.0897364792246949
control	9	3	3.226721155643463	3.228986430168152	0.0022652745246887	0.070203603454448
control	9	4	3.226721155643463	3.232478666305542	0.0057575106620788	0.1784322345923539
control	9	5	3.226721155643463	3.231694495677948	0.0049733400344851	0.1541298362824711
control	9	6	3.226721155643463	3.2353990197181703	0.0086778640747073	0.2689375268615944
control	9	7	3.226721155643463	3.238570046424866	0.0118488907814029	0.3672114883766605
adaptive	3	0	3.236645305156708	3.237837553024292	0.0011922478675843	0.0368359135826467
adaptive	3	1	3.236645305156708	3.239007067680359	0.0023617625236513	0.0729694576013185
adaptive	3	2	3.236645305156708	3.237938022613525	0.0012927174568178	0.0399400408428508
adaptive	3	3	3.236645305156708	3.2382738471031187	0.001628541946411	0.0503157372176805
adaptive	3	4	3.236645305156708	3.2370720148086547	0.000426709651947	0.0131837013857272
adaptive	3	5	3.236645305156708	3.2459808230400085	0.0093355178833007	0.2884319103000625
adaptive	3	6	3.236645305156708	3.2378284096717835	0.0011831045150758	0.0365534188497858
adaptive	3	7	3.236645305156708	3.237306129932404	0.000660824775696	0.0204169661298142
adaptive	6	0	3.236645305156708	3.2431334614753724	0.0064881563186647	0.2004592937115361
adaptive	6	1	3.236645305156708	3.2394560098648078	0.0028107047080996	0.0868400549782982
adaptive	6	2	3.236645305156708	3.2402147889137267	0.003569483757019	0.1102834391934157
adaptive	6	3	3.236645305156708	3.23832825422287	0.0016829490661622	0.0519967097871666
adaptive	6	4	3.236645305156708	3.239791011810303	0.0031457066535951	0.0971903423765133
adaptive	6	5	3.236645305156708	3.239894425868988	0.0032491207122804	0.1003854425167894
adaptive	6	6	3.236645305156708	3.241945946216583	0.0053006410598754	0.1637695996972658
adaptive	6	7	3.236645305156708	3.246317780017853	0.0096724748611451	0.2988425962441655
adaptive	9	0	3.236645305156708	3.2413324236869814	0.0046871185302737	0.1448140926287494
adaptive	9	1	3.236645305156708	3.2668148398399355	0.0301695346832278	0.932123598318324
adaptive	9	2	3.236645305156708	3.243823170619263	0.0071778655052185	0.2217686780130844
adaptive	9	3	3.236645305156708	3.2508271098136903	0.0141818046569826	0.4381636948104193
adaptive	9	4	3.236645305156708	3.2453984141349794	0.0087531089782717	0.2704376956080442
adaptive	9	5	3.236645305156708	3.2482949614524843	0.0116496562957766	0.3599299644362049
adaptive	9	6	3.236645305156708	3.2408349752426147	0.0041896700859069	0.1294448322536884
adaptive	9	7	3.236645305156708	3.247584366798401	0.0109390616416931	0.3379752988152491

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# sae_training_results.csv
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run	layer	head	mse	10	path
control	3	0	0.0172257721424102	21.7080078125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	1	0.0293172542005777	46.67431640625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	2	0.0334978848695755	51.5087890625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	3	0.0224431678652763	32.59423828125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	4	0.0192121602594852	28.86279296875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	5	0.0260399766266345	38.6435546875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	6	0.0171356908977031	23.0	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	3	7	0.0131652913987636	16.505859375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	0	0.0253908522427082	40.8994140625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	1	0.0165982525795698	19.63232421875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	2	0.0226250123232603	28.68994140625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	3	0.0403507910668849	51.14794921875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	4	0.0254552252590656	39.88671875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	5	0.02501917257905	36.52783203125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	6	6	0.0364407338201999	51.58154296875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data

control	6	7	0.0366010814905166	49.01123046875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	0	0.0425398126244545	53.59765625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	1	0.044998750090599	66.68505859375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	2	0.0455866456031799	72.638671875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	3	0.0326923504471778	45.21923828125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	4	0.0431592501699924	62.19287109375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	5	0.0343580916523933	47.33154296875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	6	0.0463372319936752	68.5830078125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
control	9	7	0.0415719076991081	54.89501953125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	0	0.0288014523684978	47.509765625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	1	0.022855419665575	34.24267578125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	2	0.0177245158702135	24.7119140625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	3	0.0200660899281501	28.41162109375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	4	0.016988318413496	21.3330078125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	5	0.0200767070055007	23.72119140625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	6	0.0191490910947322	25.4501953125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	3	7	0.0166409760713577	21.763671875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	0	0.0332508236169815	49.7724609375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	1	0.0267446376383304	35.396484375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	2	0.0260142646729946	32.8828125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	3	0.0241076610982418	34.83251953125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	4	0.0303179696202278	47.33740234375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	5	0.0302809216082096	44.18115234375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	6	0.032678086310625	56.07421875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	6	7	0.0432712845504283	63.564453125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	0	0.0425472073256969	64.0791015625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	1	0.0495963059365749	77.10498046875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	2	0.0486111715435981	66.7236328125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	3	0.0568351671099662	61.4462890625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	4	0.0528849549591541	78.150390625	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	5	0.0575123615562915	101.0283203125	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	6	0.0441000536084175	61.09912109375	/content/drive/MyDrive/Project_XAI_Physical_Janus/data
adaptive	9	7	0.0545625202357769	81.23779296875	/content/drive/MyDrive/Project_XAI_Physical_Janus/data

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# topology_stats.csv
```

run	layer	mean_cosine_sim	max_cosine_sim	effective_rank	rank_utilization_pct
control	3	-0.001	0.0218	280.4408	54.7736
control	6	-0.0009	0.0177	282.125	55.1025
control	9	-0.0006	0.0305	286.9126	56.0376
adaptive	3	0.0004	0.0146	289.5353	56.5499
adaptive	6	-0.0003	0.0083	307.4923	60.0571
adaptive	9	-0.0	0.0121	290.4044	56.7196