tide test51

Lucy Score = Throughput x Availability x Acc / 10,000. LPD condenses live-fit vs Acc-champ RAM.
[T]=Tween [S]=Split [FP]=FastProxy [L]=Linear [HP]=HeadProxy
running - epoch 1 - lr 0.05 - 2026-09-12 01:06:15 - 0.0.0.0:8080
This epoch 1207 / 122400 cells. Recorded 1207 results. Learning rate 0.05.
Score 0 usually means the cell finished before a Lucy pulse (Acc never sampled). Score is live-fit: Throughput x Availability x Acc.
SGD that blocks serve dies on Availability. SoftAcc is serve-confidence only.
think-race host - tree sweep feeds Tide Lucy reports

Lucy champions (this tide)

Axis	Cell	Score	Soft	Acc	Thru	Avail
hard acc	flee|1x1x1|dense|bfloat16|lr=20|cam=2|StepTweenSplit	6.89	89.3	92.1	8.3	90.1
throughput	chase|1x1x1|dense|float64|lr=0.02|cam=1|StepTweenSplit	541.84	13.9	22.5	2560.9	93.9
availability	shock|2x2x2|dense|float32|lr=1e+06|cam=1|StepTweenSplit	5.90	1.6	30.3	19.6	99.3
lucy score	chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	1553.61	22.0	77.4	2105.5	95.3
mobile score (trap)	chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	1553.61	22.0	77.4	2105.5	95.3
acc/sec	flee|2x2x2|dense|float32|lr=10000|cam=3|StepTweenSplit	42.88	5.1	98.6	45.6	95.4

Lucy axis champions (this tide)

Axis	Mode	DType	Arch	Value
hard_acc	Step[T][S]	float16	bicameralx2	100.00
throughput	Step[T][S]	float64	singlex1	2560.91
availability	Step[T][S]	float32	singlex1	99.33
score	Step[T][S]	float64	singlex1	1553.61
soft_acc	Step[T][S]	bfloat16	bicameralx2	89.35
acc_thru	Step[T][S]	float64	singlex1	1630.16
realtime	Step[T][S]	float64	singlex1	2405.16
keep_learn	Step[T][S]	float32	tricameralx3	32.79
acc_per_sec	Step[T][S]	float32	tricameralx3	32.79
consistency	Step[T][S]	float64	singlex1	100.00
stability	Step[T][S]	float32	singlex1	100.00
mobile_score	Step[T][S]	float64	singlex1	32302.48
lpd	Step[T][S]	float64	singlex1	0.56
mspeed	Step[T][S]	float64	singlex1	1.00
mavail	Step[T][S]	bfloat16	singlex1	1.00
mix	Step[T][S]	float64	singlex1	0.91
gold_std	Step[T][S]	float16	singlex1	24.62

Best settings per train mode

Mode	DType	Format	Score	Soft	Acc	Avail	n
Step[T][S]	float64	none	1553.6	22.0	77.4	95.3	1207

Best dtype per mode

Mode	Winner dtype	Score	Soft	Acc
Step[T][S]	float64	1553.6	22.0	77.4

Best mode per dtype

DType	Winner mode	Score	Soft	Acc
float64	Step[T][S]	1553.6	22.0	77.4
float32	Step[T][S]	59.9	23.5	83.2
float16	Step[T][S]	15.8	13.0	98.1
bfloat16	Step[T][S]	8.2	12.9	100.0

Leaderboard (Lucy Score)

#	Cell	Score	Soft	Acc	Thru	Avail
1	chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	1553.6	22.0	77.4	2105.5	95.3
2	chase|3x3x3|dense|float64|lr=2|cam=1|StepTweenSplit	1543.4	21.2	77.0	2097.8	95.6
3	chase|1x1x1|dense|float64|lr=2|cam=1|StepTweenSplit	1481.5	21.0	74.1	2101.8	95.1
4	chase|3x3x3|dense|float64|lr=0.2|cam=1|StepTweenSplit	1089.9	16.4	49.6	2322.5	94.7
5	chase|1x1x1|dense|float64|lr=0.2|cam=1|StepTweenSplit	1048.3	15.8	46.3	2402.5	94.2
6	chase|2x2x2|dense|float64|lr=0.2|cam=1|StepTweenSplit	1043.3	15.9	46.6	2363.9	94.6
7	chase|1x1x1|dense|float64|lr=0.2|cam=2|StepTweenSplit	878.7	16.4	50.2	1875.3	93.4
8	chase|3x3x3|dense|float64|lr=0.2|cam=2|StepTweenSplit	871.3	16.5	50.4	1848.5	93.5
9	chase|2x2x2|dense|float64|lr=0.2|cam=2|StepTweenSplit	848.8	16.0	48.1	1888.6	93.4
10	flee|2x2x2|dense|float64|lr=0.02|cam=1|StepTweenSplit	812.1	17.5	81.2	1025.3	97.5
11	flee|1x1x1|dense|float64|lr=2|cam=1|StepTweenSplit	757.5	26.8	95.9	807.4	97.9
12	flee|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	749.8	27.1	97.1	790.7	97.7
13	flee|3x3x3|dense|float64|lr=2|cam=1|StepTweenSplit	743.8	27.1	97.2	783.4	97.7
14	flee|2x2x2|dense|float64|lr=0.2|cam=1|StepTweenSplit	719.5	21.3	81.7	899.6	97.9
15	chase|1x1x1|dense|float64|lr=0.2|cam=3|StepTweenSplit	711.8	16.5	50.9	1514.3	92.4
16	flee|3x3x3|dense|float64|lr=0.2|cam=1|StepTweenSplit	696.6	20.8	79.1	900.3	97.8
17	flee|1x1x1|dense|float64|lr=0.2|cam=2|StepTweenSplit	688.2	23.1	84.1	842.8	97.1
18	chase|3x3x3|dense|float64|lr=0.2|cam=3|StepTweenSplit	685.9	16.1	49.2	1503.6	92.7
19	flee|2x2x2|dense|float64|lr=2|cam=2|StepTweenSplit	676.8	27.4	97.5	715.7	97.0
20	flee|1x1x1|dense|float64|lr=2|cam=2|StepTweenSplit	673.1	27.2	97.3	711.5	97.2

Leaderboard (SoftAcc)

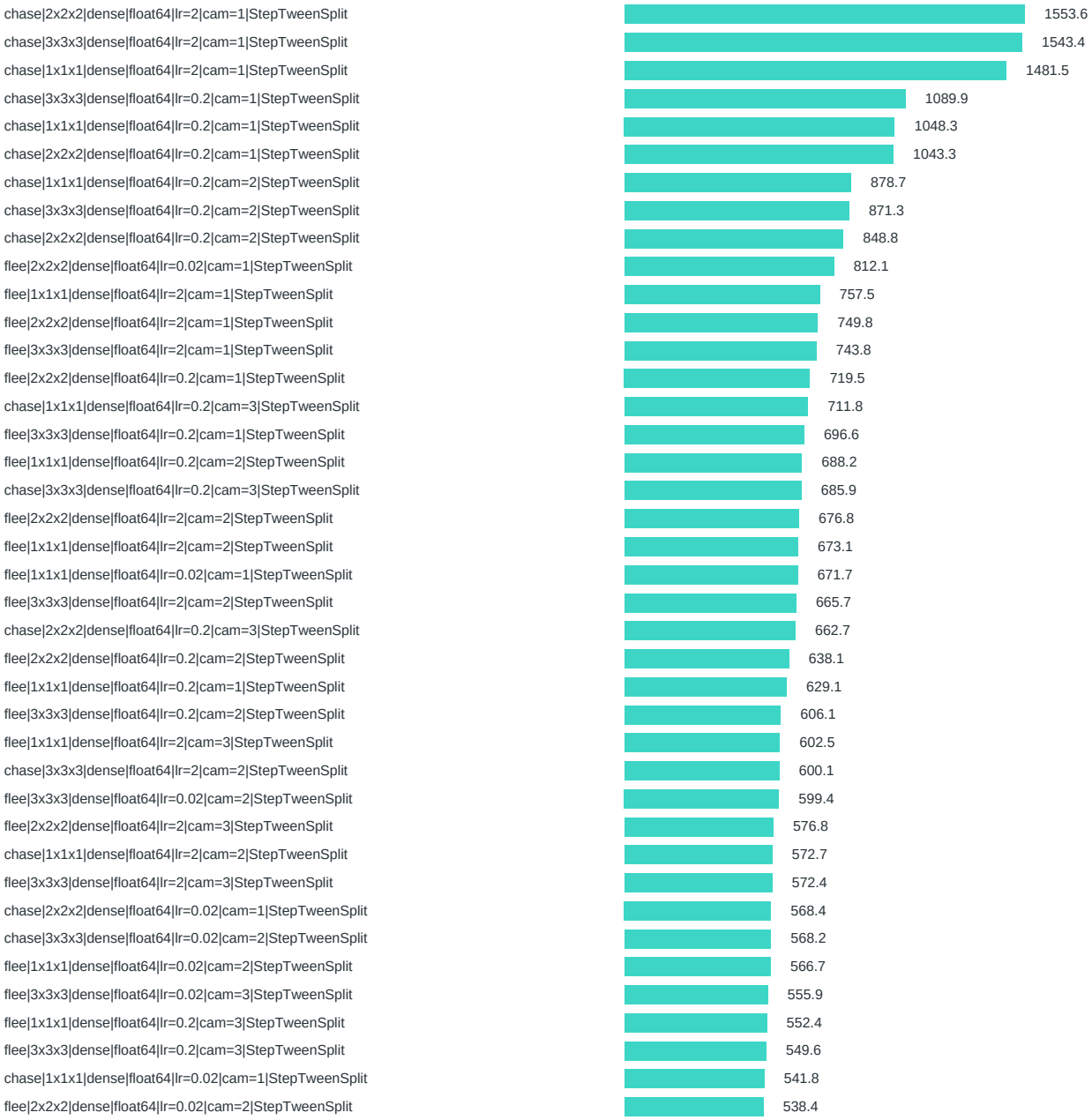
#	Cell	Score	Soft	Acc	Thru	Avail
1	flee|2x2x2|dense|float64|lr=2|cam=2|StepTweenSplit	676.8	27.4	97.5	715.7	97.0
2	flee|1x1x1|dense|float64|lr=2|cam=3|StepTweenSplit	602.5	27.3	97.7	644.2	95.8
3	flee|1x1x1|dense|float64|lr=2|cam=2|StepTweenSplit	673.1	27.2	97.3	711.5	97.2
4	flee|3x3x3|dense|float64|lr=2|cam=1|StepTweenSplit	743.8	27.1	97.2	783.4	97.7
5	flee|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	749.8	27.1	97.1	790.7	97.7
6	flee|2x2x2|dense|float64|lr=2|cam=3|StepTweenSplit	576.8	27.0	97.1	619.1	95.9
7	flee|3x3x3|dense|float64|lr=2|cam=2|StepTweenSplit	665.7	27.0	96.8	708.9	97.0
8	flee|1x1x1|dense|float64|lr=2|cam=1|StepTweenSplit	757.5	26.8	95.9	807.4	97.9
9	flee|3x3x3|dense|float64|lr=2|cam=3|StepTweenSplit	572.4	26.8	96.7	618.3	95.7
10	flee|1x1x1|dense|float64|lr=0.2|cam=2|StepTweenSplit	688.2	23.1	84.1	842.8	97.1
11	flee|3x3x3|dense|float64|lr=0.2|cam=3|StepTweenSplit	549.6	22.8	82.1	696.0	96.1
12	flee|2x2x2|dense|float64|lr=0.2|cam=2|StepTweenSplit	638.1	22.6	82.5	798.5	96.8
13	flee|1x1x1|dense|float64|lr=0.2|cam=3|StepTweenSplit	552.4	22.2	81.3	710.6	95.6
14	chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	1553.6	22.0	77.4	2105.5	95.3
15	flee|3x3x3|dense|float64|lr=0.2|cam=2|StepTweenSplit	606.1	21.7	79.2	789.4	97.0
16	flee|2x2x2|dense|float64|lr=0.2|cam=1|StepTweenSplit	719.5	21.3	81.7	899.6	97.9
17	chase|3x3x3|dense|float64|lr=2|cam=1|StepTweenSplit	1543.4	21.2	77.0	2097.8	95.6
18	chase|1x1x1|dense|float64|lr=2|cam=1|StepTweenSplit	1481.5	21.0	74.1	2101.8	95.1
19	flee|3x3x3|dense|float64|lr=0.2|cam=1|StepTweenSplit	696.6	20.8	79.1	900.3	97.8
20	flee|1x1x1|dense|float64|lr=0.2|cam=1|StepTweenSplit	629.1	20.4	72.0	893.9	97.7

Leaderboard (hard Acc)

#	Cell	Score	Soft	Acc	Thru	Avail
1	flee|1x1x1|dense|float64|lr=2|cam=3|StepTweenSplit	602.5	27.3	97.7	644.2	95.8
2	flee|2x2x2|dense|float64|lr=2|cam=2|StepTweenSplit	676.8	27.4	97.5	715.7	97.0
3	flee|1x1x1|dense|float64|lr=2|cam=2|StepTweenSplit	673.1	27.2	97.3	711.5	97.2
4	flee|3x3x3|dense|float64|lr=2|cam=1|StepTweenSplit	743.8	27.1	97.2	783.4	97.7

#	Cell	Score	Soft	Acc	Thru	Avail
5	flee|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	749.8	27.1	97.1	790.7	97.7
6	flee|2x2x2|dense|float64|lr=2|cam=3|StepTweenSplit	576.8	27.0	97.1	619.1	95.9
7	flee|3x3x3|dense|float64|lr=2|cam=2|StepTweenSplit	665.7	27.0	96.8	708.9	97.0
8	flee|3x3x3|dense|float64|lr=2|cam=3|StepTweenSplit	572.4	26.8	96.7	618.3	95.7
9	flee|1x1x1|dense|float64|lr=2|cam=1|StepTweenSplit	757.5	26.8	95.9	807.4	97.9
10	flee|1x1x1|dense|float64|lr=0.2|cam=2|StepTweenSplit	688.2	23.1	84.1	842.8	97.1
11	flee|2x2x2|dense|float64|lr=0.2|cam=2|StepTweenSplit	638.1	22.6	82.5	798.5	96.8
12	flee|3x3x3|dense|float64|lr=0.2|cam=3|StepTweenSplit	549.6	22.8	82.1	696.0	96.1
13	flee|2x2x2|dense|float64|lr=0.2|cam=1|StepTweenSplit	719.5	21.3	81.7	899.6	97.9
14	flee|1x1x1|dense|float64|lr=0.2|cam=3|StepTweenSplit	552.4	22.2	81.3	710.6	95.6
15	flee|2x2x2|dense|float64|lr=0.02|cam=1|StepTweenSplit	812.1	17.5	81.2	1025.3	97.5
16	flee|3x3x3|dense|float64|lr=0.2|cam=2|StepTweenSplit	606.1	21.7	79.2	789.4	97.0
17	flee|3x3x3|dense|float64|lr=0.2|cam=1|StepTweenSplit	696.6	20.8	79.1	900.3	97.8
18	chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit	1553.6	22.0	77.4	2105.5	95.3
19	chase|3x3x3|dense|float64|lr=2|cam=1|StepTweenSplit	1543.4	21.2	77.0	2097.8	95.6
20	flee|3x3x3|dense|float64|lr=0.02|cam=3|StepTweenSplit	555.9	18.7	74.9	773.6	95.9

Top scores



Best settings per mode



Mean Score by train mode



Mean hard Acc by train mode



Mean SoftAcc by train mode



Mean Availability by train mode



Mean Throughput by train mode



Mean Score by dtype



Mean hard Acc by dtype



Mean Score by arch

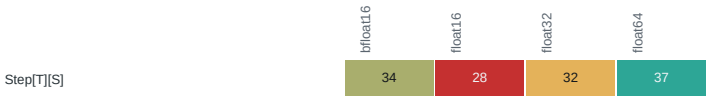


Honesty - mean Score, every mode x dtype



Honesty - mean hard Acc, every mode x dtype

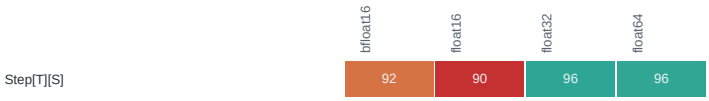
Honesty - mean hard Acc, every mode x dtype



Honesty - mean SoftAcc, every mode x dtype



Honesty - mean Avail, every mode x dtype



Mean Score, every mode x arch



Mean hard Acc, every mode x arch

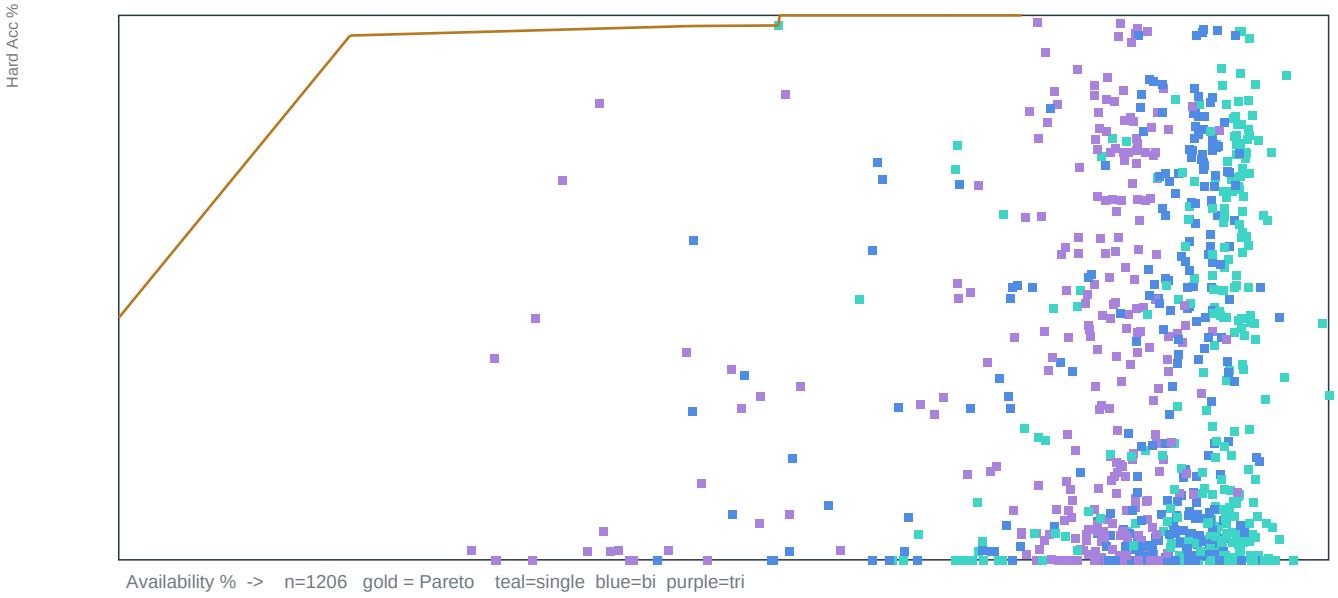


Mean Avail, every mode x arch

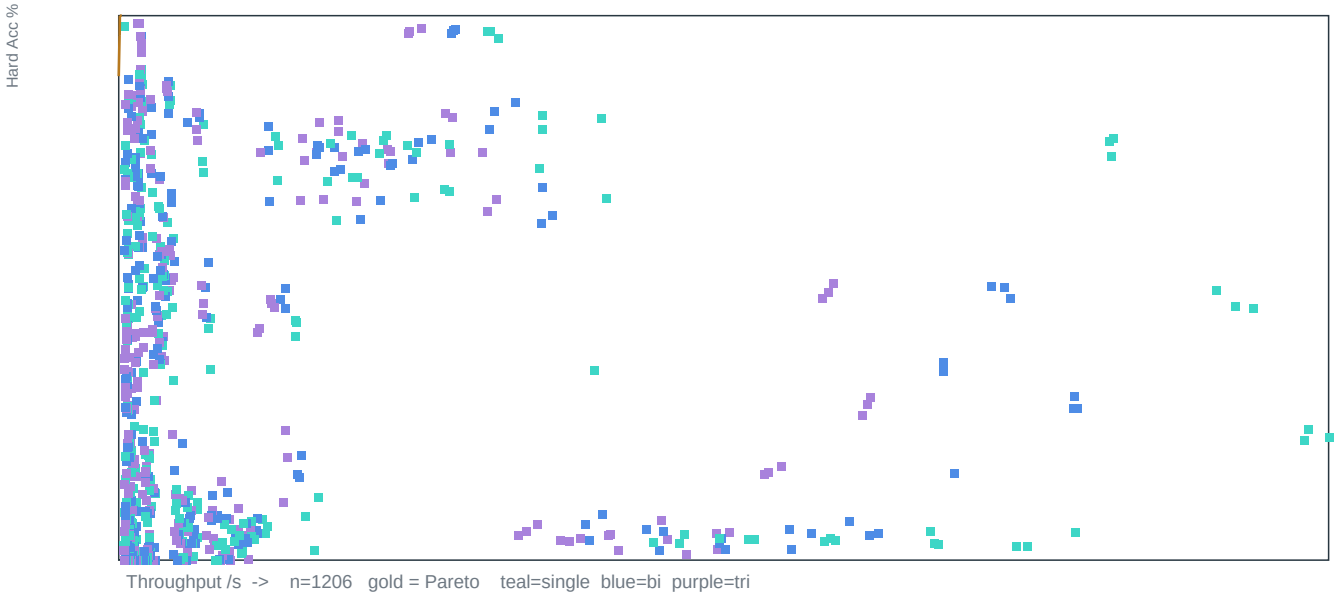
Mean Avail, every mode x arch



Pillars - Availability vs hard Acc

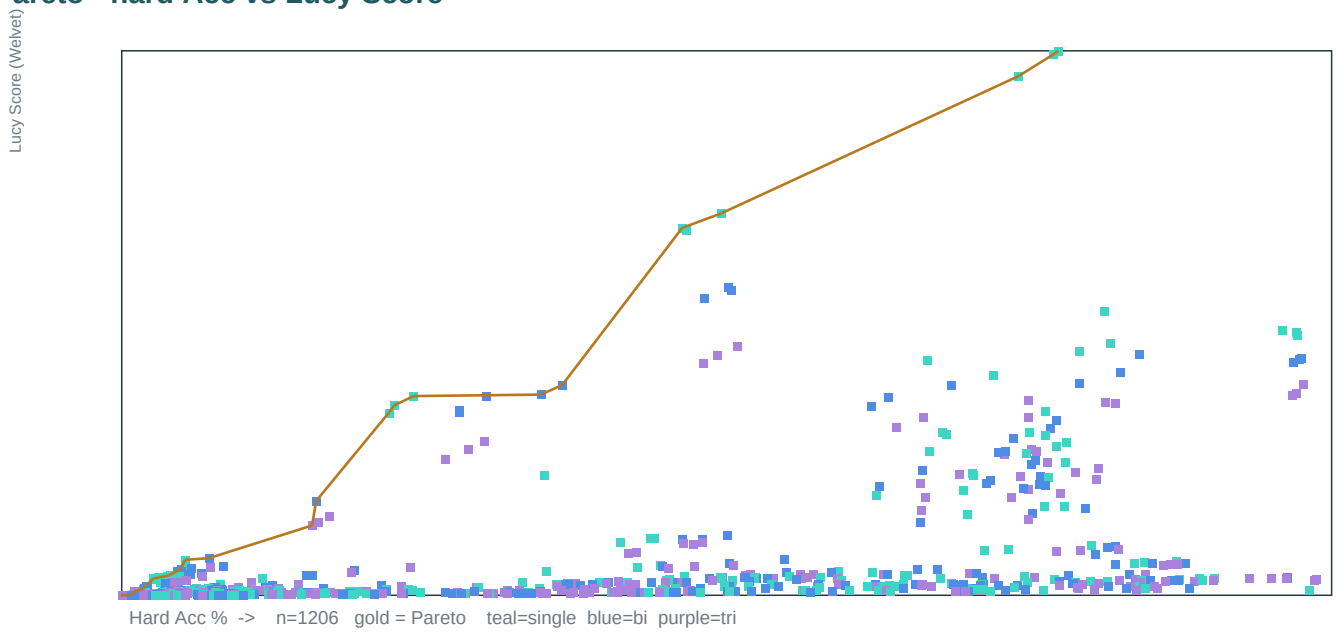


Pillars - Throughput vs hard Acc

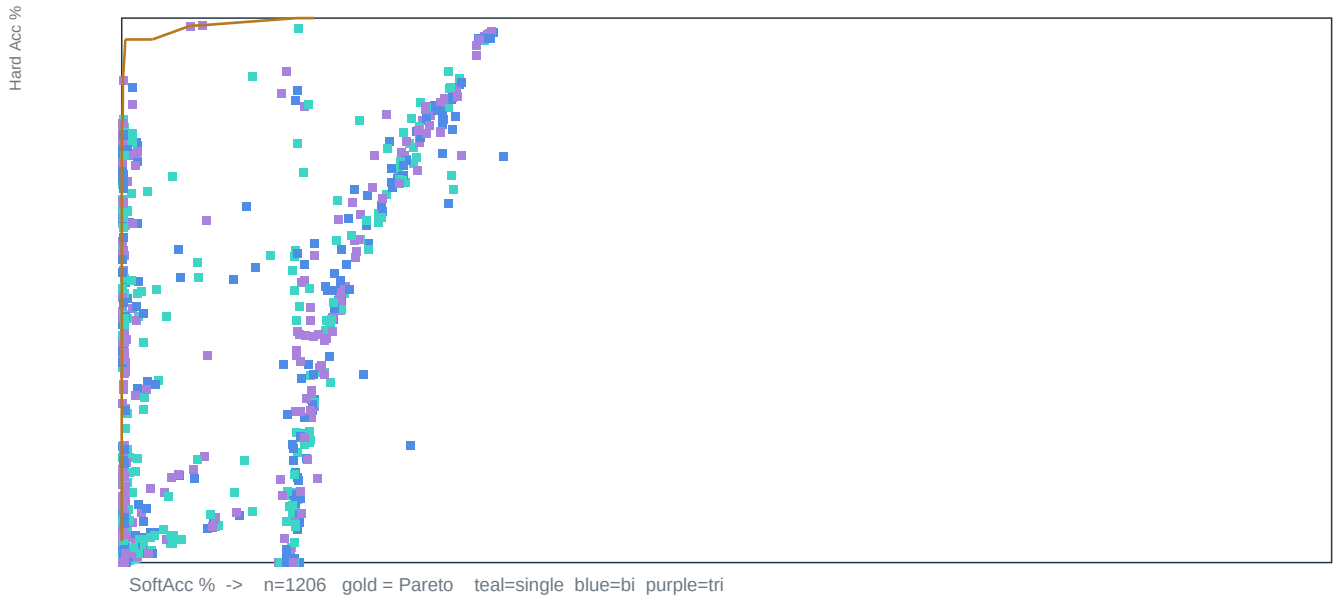


Pareto - hard Acc vs Lucy Score

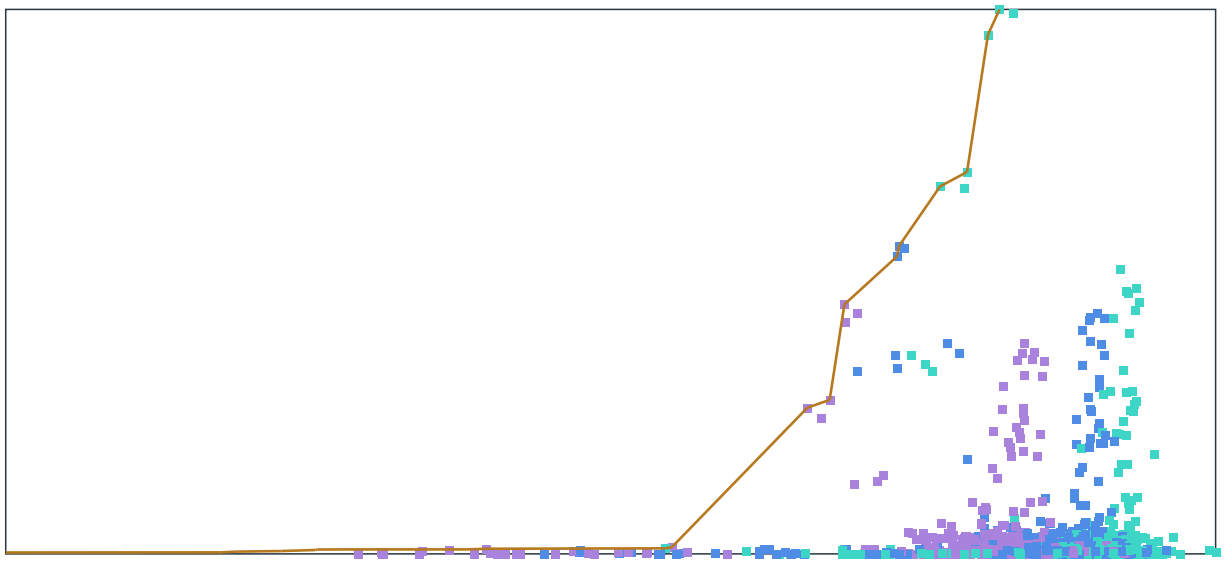
Pareto - hard Acc vs Lucy Score



SoftAcc (serve-confidence) vs hard Acc



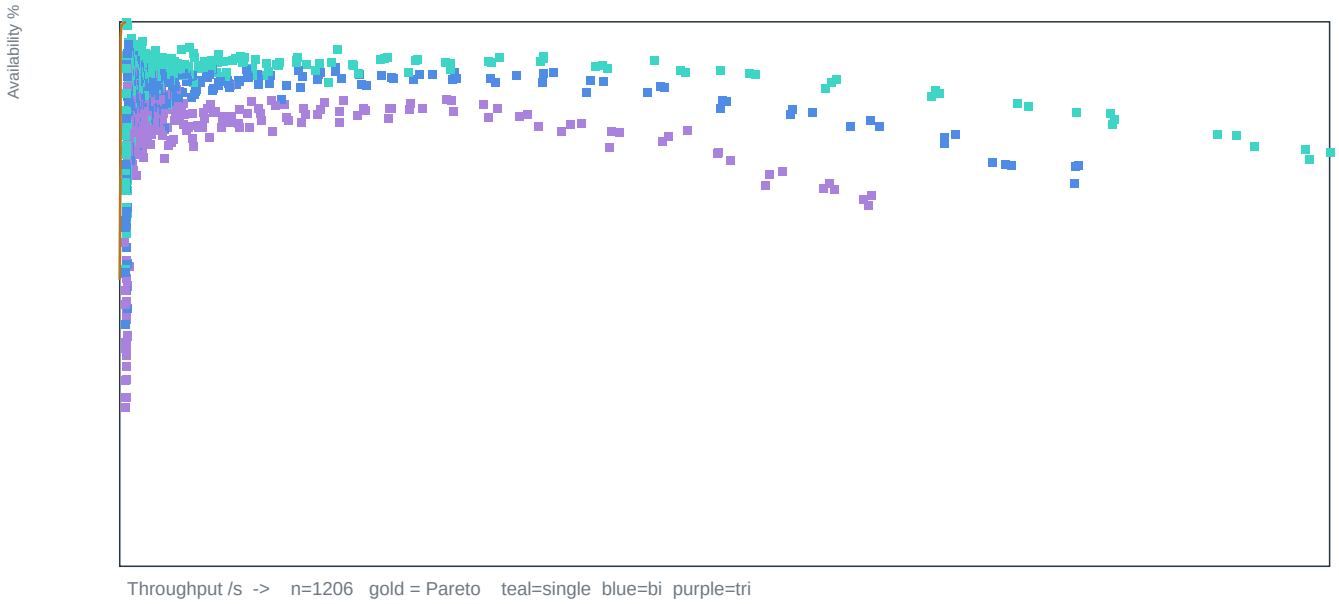
Avail vs Lucy Score (duty clock)



Availability % ->   n=1206   gold = Pareto   teal=single blue=bi purple=tri

Lucy Score

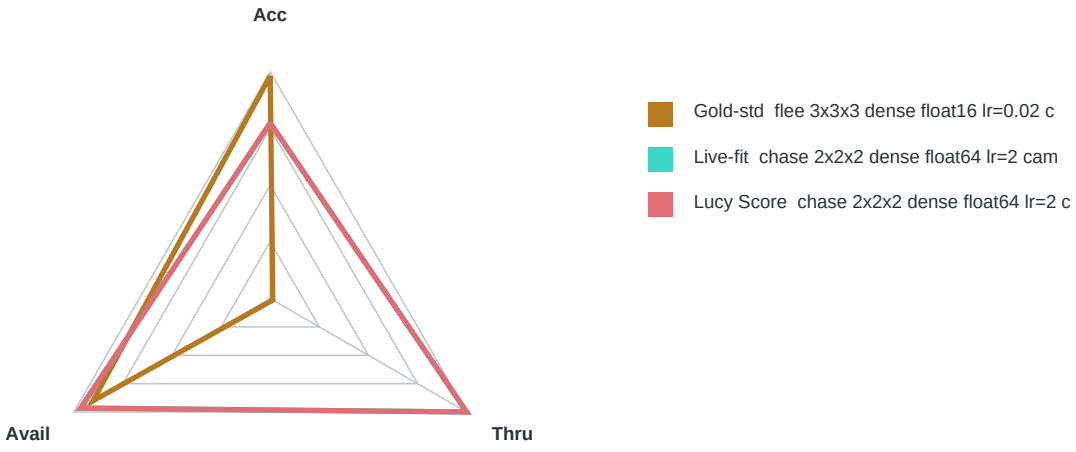
Pillars - Throughput vs Availability



Consciousness - Acc, Throughput, Availability

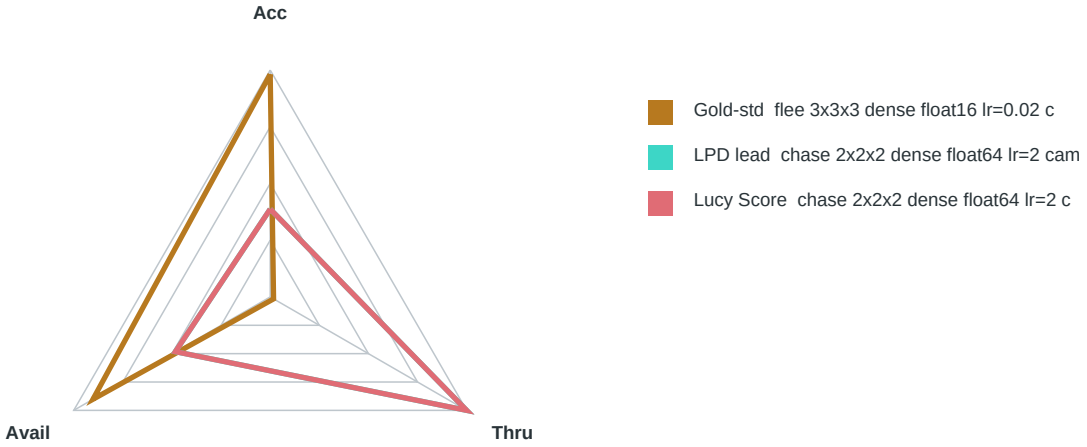
Synthetic organism / Lucy density: can the net run and train at the same time in a small box. Lucy Score = Throughput x Availability x Acc / 10,000 (hard Acc; SoftAcc is serve-confidence only). SGD that blocks serve dies on Availability. Q = geomean Acc/Thru/Avail vs learner peaks (traps do not set Thru/Avail). LPD = Q x shrink vs Acc-champ RAM; 0 unless Acc keep >=70%. Gold = all 3 pillars >=80% at <=20% Acc-champ RAM. Gold-std = Acc >=80% plus Thru or Avail, then smallest then fastest. Score/MiB is the binary trap.
Acc champ teleport|3x3x3|dense|float16|lr=0.2|cam=2|StepTweenSplit Acc 100.0 Thru 13 Avail 92.3% 30.2 KiB (RAM reference)
Lucy Score champ (T x Avail x Acc) chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit Score 1553.6 Acc 77.4 Soft 22 49.2 KiB
Live-fit champ (best Q) chase|2x2x2|dense|float64|lr=2|cam=1|StepTweenSplit Acc 77.4 Thru 2106 Avail 95.3% 49.2 KiB
Gold-std (2+ pillars, Acc keep >= 80%, then smallest then fastest): flee|3x3x3|dense|float16|lr=0.02|cam=1|StepTweenSplit mode Step[T][S] Acc 98.1 Thru 18 24.6 KiB
Board fastest chase|1x1x1|dense|float64|lr=0.02|cam=1|StepTweenSplit Thru 2561 (traps may own this) Best availability shock|2x2x2|dense|float32|lr=1e+06|cam=1|StepTweenSplit 99.3%
Learner Thru peak 2106 learner Avail peak 98.7%

Consciousness radar - Acc / Thru / Avail vs learner peaks



Memory density radar - same pillars x shrink vs Acc champ (traps sit at origin)

Memory density radar - same pillars x shrink vs Acc champ (traps sit at origin)



No gold cell yet. Need all three pillars at 80% of learner peaks in one fifth of Acc-champ RAM.

Gold-standard train modes - 2+ pillars, Acc keep >= 80%, smallest then fastest

Mode	n	Acc	KiB	Thru	Cell
Step[T][S]	118	100.0	24.6	1025	flee 3x3x3 dense float16 lr=0.02 cam=1 StepTweenSplit / flee 2x2x2~

Lucy density (LPD) - Q x shrink vs Acc-champ RAM; 0 if Acc keep < 70%

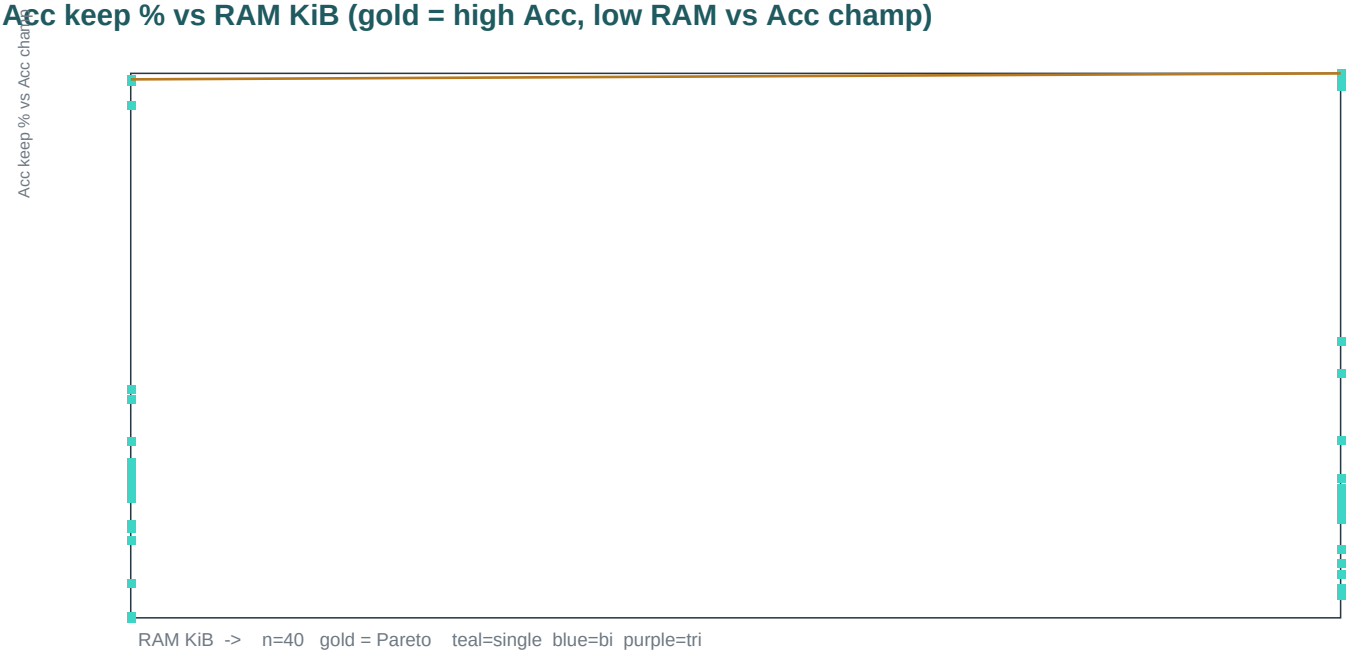
Band	Cell	Acc%	Thru%	Avail%	Q%	RAM%	xSmall	LPD	Acc	Thru	KiB
-	chase 2x2x2 dense float64 lr=2 cam=1 StepTween~	77	100	97	91	163	0.6	0.56	77.4	2106	49.2
-	chase 3x3x3 dense float64 lr=2 cam=1 StepTween~	77	100	97	91	163	0.6	0.56	77.0	2098	49.2
-	chase 1x1x1 dense float64 lr=2 cam=1 StepTween~	74	100	96	89	163	0.6	0.55	74.1	2102	49.2
keep	flee 2x2x2 dense float64 lr=0.02 cam=1 StepTwee~	81	49	99	73	163	0.6	0.45	81.2	1025	49.2
keep	flee 1x1x1 dense float64 lr=2 cam=1 StepTweenS~	96	38	99	71	163	0.6	0.44	95.9	807	49.2
keep	flee 2x2x2 dense float64 lr=2 cam=1 StepTweenS~	97	38	99	71	163	0.6	0.44	97.1	791	49.2
keep	flee 3x3x3 dense float64 lr=2 cam=1 StepTweenS~	97	37	99	71	163	0.6	0.44	97.2	783	49.2
keep	flee 2x2x2 dense float64 lr=0.2 cam=1 StepTween~	82	43	99	70	163	0.6	0.43	81.7	900	49.2
-	flee 3x3x3 dense float64 lr=0.2 cam=1 StepTween~	79	43	99	69	163	0.6	0.43	79.1	900	49.2
-	flee 1x1x1 dense float64 lr=0.2 cam=1 StepTween~	72	42	99	67	163	0.6	0.41	72.0	894	49.2
-	flee 2x2x2 dense float64 lr=20 cam=1 StepTween~	76	33	99	63	163	0.6	0.39	76.3	705	49.2
-	flee 1x1x1 dense float64 lr=200 cam=1 StepTween~	75	30	99	61	163	0.6	0.37	75.0	635	49.2
-	flee 3x3x3 dense float64 lr=200 cam=1 StepTween~	76	29	98	60	163	0.6	0.37	76.3	615	49.2
-	flee 1x1x1 dense float64 lr=1000 cam=1 StepTwee~	78	27	99	59	163	0.6	0.37	78.1	571	49.2
-	flee 2x2x2 dense float64 lr=1000 cam=1 StepTwee~	77	27	99	59	163	0.6	0.36	77.2	565	49.2
-	flee 3x3x3 dense float64 lr=1000 cam=1 StepTwee~	75	26	99	58	163	0.6	0.36	74.8	556	49.2
-	flee 2x2x2 dense float64 lr=10000 cam=1 StepTwe~	78	24	99	57	163	0.6	0.35	78.0	498	49.2
keep	flee 1x1x1 dense float64 lr=0.2 cam=2 StepTween~	84	40	98	69	200	0.5	0.35	84.1	843	60.5
keep	flee 2x2x2 dense float64 lr=2 cam=2 StepTweenS~	97	34	98	69	200	0.5	0.34	97.5	716	60.5
keep	flee 1x1x1 dense float64 lr=2 cam=2 StepTweenS~	97	34	98	69	200	0.5	0.34	97.3	712	60.5

Consciousness rank - Q = geomean Acc/Thru/Avail keep

Band	Cell	Acc%	Thru%	Avail%	Q%	LPD	Thru	Avail
-	chase 2x2x2 dense float64 lr=2 cam=1 StepTweenSplit	77	100	97	91	0.56	2106	95.3
-	chase 3x3x3 dense float64 lr=2 cam=1 StepTweenSplit	77	100	97	91	0.56	2098	95.6
-	chase 1x1x1 dense float64 lr=2 cam=1 StepTweenSplit	74	100	96	89	0.55	2102	95.1
keep	flee 2x2x2 dense float64 lr=0.02 cam=1 StepTweenSplit	81	49	99	73	0.45	1025	97.5

keep	flee 1x1x1 dense float64 lr=2 cam=1 StepTweenSplit	96	38	99	71	0.44	807	97.9
keep	flee 2x2x2 dense float64 lr=2 cam=1 StepTweenSplit	97	38	99	71	0.44	791	97.7
keep	flee 3x3x3 dense float64 lr=2 cam=1 StepTweenSplit	97	37	99	71	0.44	783	97.7
keep	flee 2x2x2 dense float64 lr=0.2 cam=1 StepTweenSplit	82	43	99	70	0.43	900	97.9
-	flee 3x3x3 dense float64 lr=0.2 cam=1 StepTweenSplit	79	43	99	69	0.43	900	97.8
keep	flee 1x1x1 dense float64 lr=0.2 cam=2 StepTweenSplit	84	40	98	69	0.35	843	97.1

Acc keep % vs RAM KiB (gold = high Acc, low RAM vs Acc champ)

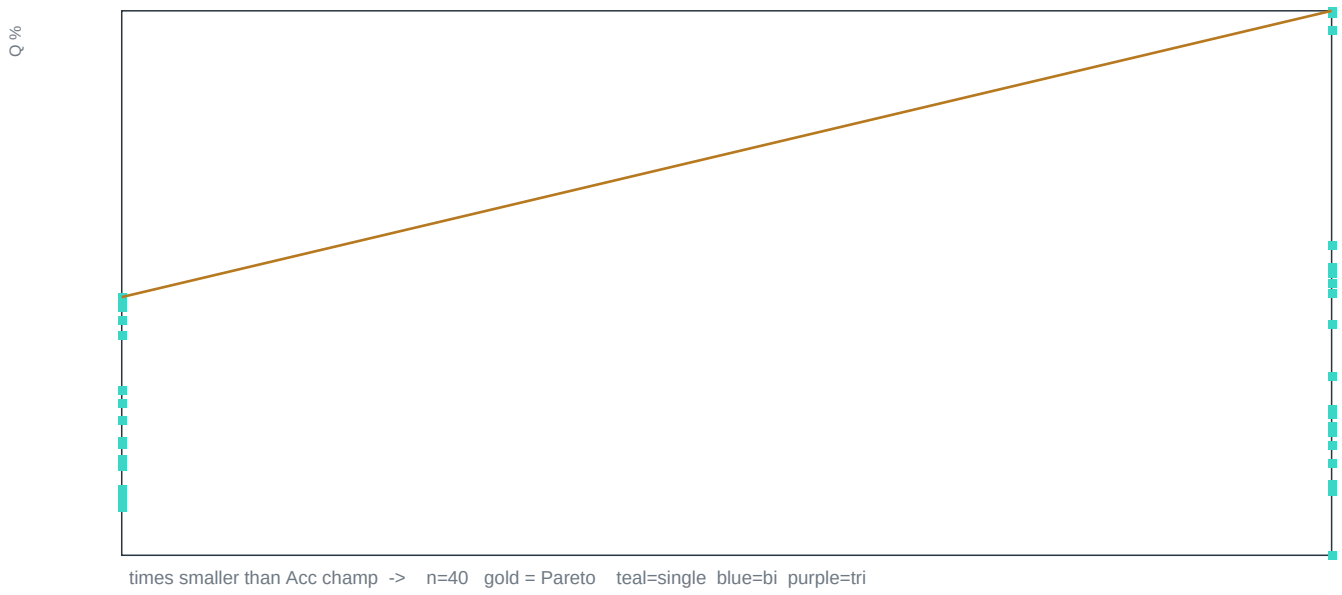


Q% vs RAM KiB (gold = high consciousness, low RAM)



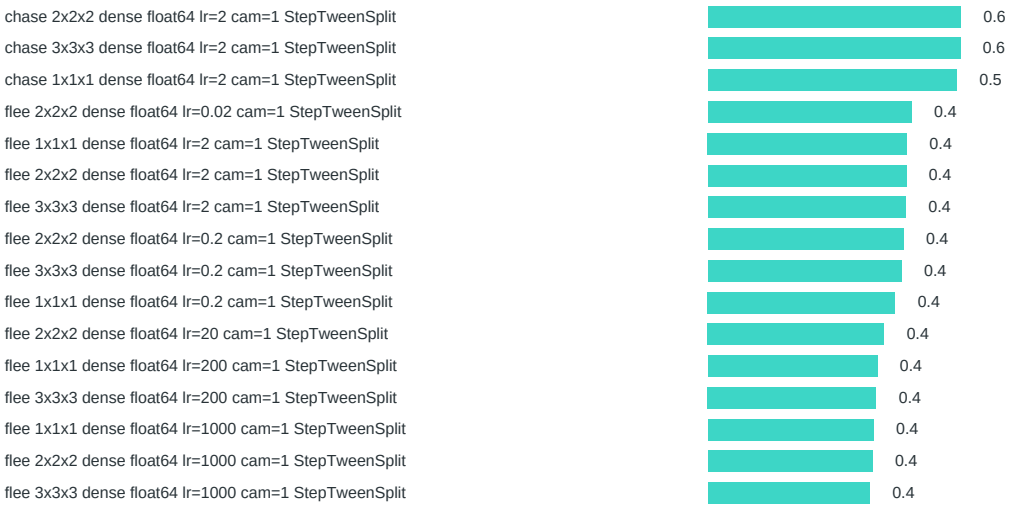
Q% vs shrink vs Acc champ (gold = upper right)

Q% vs shrink vs Acc champ (gold = upper right)



times smaller than Acc champ -> n=40 gold = Pareto teal=single blue=bi purple=tri

Top Lucy density (LPD)

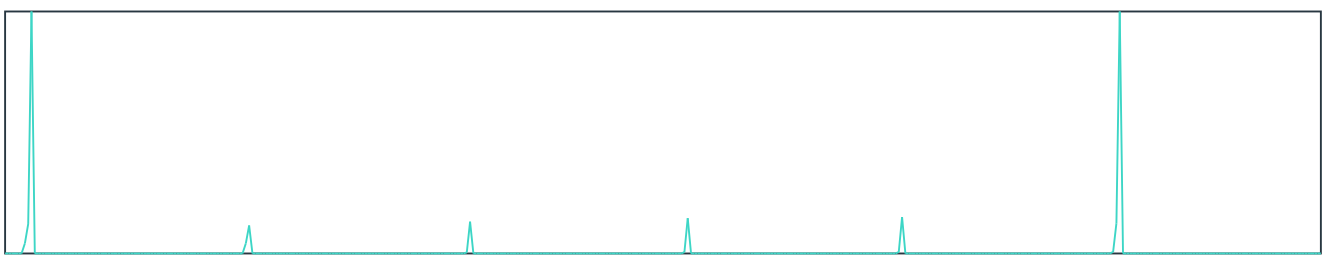


Live pulse (Score)



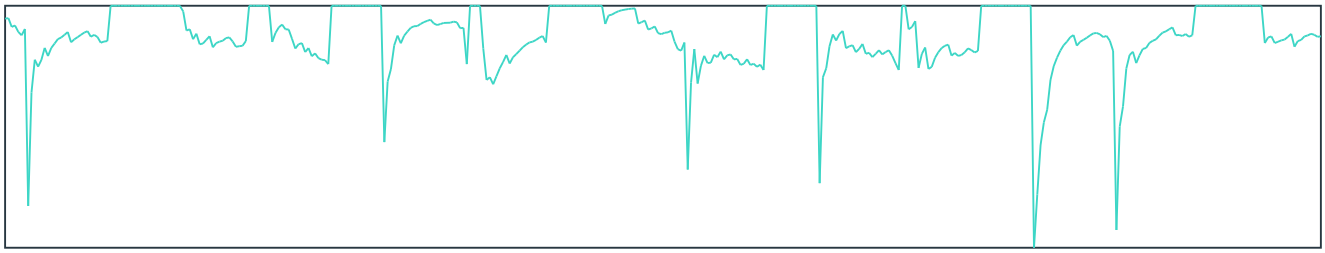
n=400 min=0.00 max=4.41

Live pulse (SoftAcc)



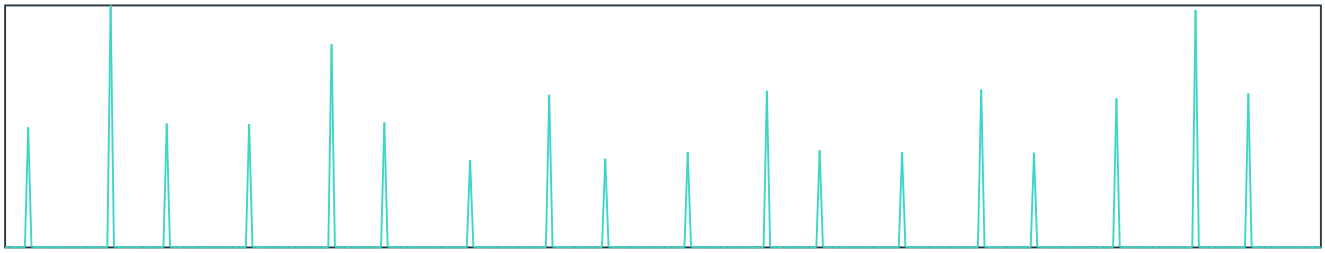
n=400 min=0.00 max=100.00

Live pulse (Availability)



n=400 min=45.93 max=100.00

Live pulse (Throughput)



n=400 min=7.94 max=2726.57

Queue by train mode (this epoch)

Mode	Done	Run	Left	Total
Step[T][S]	1207	1	11032	12240
[T]Alt	0	0	12240	12240
Step[T]Alt	0	0	12240	12240
[T][S][HP]	0	0	12240	12240
[T][S][L]	0	0	12240	12240
[T][S][FP]	0	0	12240	12240
[T][S][L]Cache	0	0	12240	12240
[T][S][HP]Async	0	0	12240	12240
[T][S]Sparse	0	0	12240	12240
Mesh[T][S]	0	0	12240	12240