tide swiglu

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
done - epoch 1/1 (1 left, 100% overall) - lr unset - 2026-08-23 13:32:59 -
This epoch 2346 / 2346 cells. Recorded 2346 results. Learning rate unset.
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.
pi_collection - swiglu - offline report

Lucy champions (this tide)

Axis	Cell	Score	Soft	Acc	Thru	Avail
hard acc	binary|none|[T][S]Sparse|single|simd	375.36	25.0	31.6	4138.4	36.3
throughput	float32|none|sgd|single|simd	1727.93	25.0	28.5	18742.1	36.9
availability	float32|none|[T][S]Sparse|tricameral|simd	398.74	25.0	21.4	3215.3	49.6
lucy score	float32|none|tween_chain|single|simd	1841.79	25.0	36.9	18321.8	40.2
mobile score (trap)	binary|none|sgd|single|simd	1217.26	25.0	24.6	14112.8	34.5
t->50%	fp6|none|step_sgd|bicameral|simd	42.12	25.0	30.8	818.6	20.6
acc/sec	int64|none|sgd|single|simd	514.12	25.0	29.9	6028.8	34.1

Lucy axis champions (this tide)

Axis	Mode	DType	Arch	Value
hard_acc	Mesh[T]Alt	uint6	tricameralx3	43.75
throughput	sgd	float32	singlex1	18742.14
availability	[T][S]Sparse	float32	tricameralx3	49.61
score	tween_chain	float32	singlex1	1841.79
soft_acc	[T][S]Sparse	binary	singlex1	25.00
acc_thru	tween_chain	float32	singlex1	6766.79
realtime	tween_chain	float32	singlex1	7367.11
adapt	tween_chain	binary	singlex1	25.00
keep_learn	step_tween	binary	singlex1	12.50
acc_per_sec	sgd	int64	singlex1	12.49
time_to_50	step_sgd	fp6	bicameralx2	0.22
consistency	sgd	float64	singlex1	100.00
stability	sgd	fp4	singlex1	100.00
mobile_score	sgd	binary	singlex1	24546036~
lpd	Mesh[T]	binary	singlex1	6.64
mspeed	tween_chain	float32	singlex1	1.00
mavail	Mesh[T][S]Sparse	float32	tricameralx3	1.00
mix	tween_chain	float32	singlex1	0.88
gold_std	[T][S]Sparse	int2	bicameralx2	0.15

Best settings per train mode

Mode	DType	Format	Score	Soft	Acc	Avail	n
tween_chain	float32	none	1841.8	25.0	36.9	40.2	102
sgd	float32	none	1727.9	25.0	28.5	36.9	102
tween	float32	none	1724.4	25.0	20.7	38.6	102
MeshBP	float32	none	1577.6	25.0	23.6	41.0	102
step_sgd	float32	none	1479.6	25.0	22.9	36.4	102
Step[T][S]	float32	none	1445.2	25.0	23.5	39.1	102
step_tween_chain	float32	none	1389.1	25.0	23.3	35.8	102
Mesh[T]	float32	none	1329.1	25.0	33.2	36.3	102
step_tween	float32	none	1219.1	25.0	23.6	34.9	102

Mesh[T]Chain	float32	none	1190.6	25.0	24.7	38.2	102
[T][S][HP]	float32	none	1168.2	25.0	37.8	41.5	102
[T][S]	float32	none	1147.4	25.0	19.8	42.3	102
[T][S][L]Cache	float32	none	878.9	25.0	26.4	43.2	102
[T]Alt	float32	none	861.2	25.0	25.6	31.7	102
[T][S][FP]	float32	none	774.3	25.0	17.1	41.4	102
Step[T]Alt	float32	none	664.3	25.0	32.6	30.3	102
[T][S][HP]Async	float32	none	660.9	25.0	30.2	41.3	102
[T][S]Sparse	float32	none	643.6	25.0	21.4	42.9	102
Mesh[T][S]	float32	none	620.2	25.0	29.3	44.5	102
[T][S][L]	float32	none	525.8	25.0	24.8	32.5	102
Mesh[T][S][FP]	float32	none	477.4	25.0	22.7	42.3	102
Mesh[T][S]Sparse	float32	none	441.3	25.0	15.4	42.7	102
Mesh[T]Alt	float32	none	271.7	25.0	37.0	31.9	102

Best dtype per mode

Mode	Winner dtype	Score	Soft	Acc
tween_chain	float32	1841.8	25.0	36.9
sgd	float32	1727.9	25.0	28.5
tween	float32	1724.4	25.0	20.7
MeshBP	float32	1577.6	25.0	23.6
step_sgd	float32	1479.6	25.0	22.9
Step[T][S]	float32	1445.2	25.0	23.5
step_tween_chain	float32	1389.1	25.0	23.3
Mesh[T]	float32	1329.1	25.0	33.2
step_tween	float32	1219.1	25.0	23.6
Mesh[T]Chain	float32	1190.6	25.0	24.7
[T][S][HP]	float32	1168.2	25.0	37.8
[T][S]	float32	1147.4	25.0	19.8
[T][S][L]Cache	float32	878.9	25.0	26.4
[T]Alt	float32	861.2	25.0	25.6
[T][S][FP]	float32	774.3	25.0	17.1
Step[T]Alt	float32	664.3	25.0	32.6
[T][S][HP]Async	float32	660.9	25.0	30.2
[T][S]Sparse	float32	643.6	25.0	21.4
Mesh[T][S]	float32	620.2	25.0	29.3
[T][S][L]	float32	525.8	25.0	24.8
Mesh[T][S][FP]	float32	477.4	25.0	22.7
Mesh[T][S]Sparse	float32	441.3	25.0	15.4
Mesh[T]Alt	float32	271.7	25.0	37.0

Best mode per dtype

DType	Winner mode	Score	Soft	Acc
float32	tween_chain	1841.8	25.0	36.9
int8	sgd	1452.8	25.0	27.3
ternary	sgd	1219.1	25.0	23.5
binary	sgd	1217.3	25.0	24.6
int4	sgd	1180.4	25.0	22.4
int2	sgd	1163.8	25.0	23.4
float64	sgd	950.3	25.0	22.9
uint8	sgd	941.2	25.0	24.0
bfloat16	tween	857.0	25.0	23.3

fp4	sgd	806.3	25.0	24.9
fp8e4m3	tween_chain	726.3	25.0	25.2
fp8e5m2	tween_chain	639.0	25.0	28.5
float16	tween_chain	617.1	25.0	20.0
uint16	tween_chain	557.3	25.0	24.9
uint32	sgd	524.1	25.0	25.3
uint64	tween_chain	522.5	25.0	28.7
int64	sgd	514.1	25.0	29.9
int32	sgd	511.5	25.0	24.1
int16	sgd	493.5	25.0	28.3
uint4	tween_chain	450.9	25.0	25.3
uintptr	sgd	439.9	25.0	17.9
complex128	sgd	433.3	25.0	23.2
uint2	sgd	431.7	25.0	20.7
uint	sgd	426.2	25.0	21.8
complex64	sgd	424.9	25.0	27.8
int	sgd	377.5	25.0	22.1
nf4	sgd	347.5	25.0	24.5
uint3	sgd	218.4	25.0	25.2
int3	sgd	199.8	25.0	22.7
uint5	sgd	174.7	25.0	23.9
int5	sgd	171.0	25.0	21.4
int6	sgd	142.1	25.0	19.3
uint6	sgd	129.9	25.0	26.8
fp6	sgd	127.6	25.0	26.7

Leaderboard (Lucy Score)

#	Cell	Score	Soft	Acc	Thru	Avail
1	float32|none|tween_chain|single|simd	1841.8	25.0	36.9	18321.8	40.2
2	float32|none|sgd|single|simd	1727.9	25.0	28.5	18742.1	36.9
3	float32|none|tween|single|simd	1724.4	25.0	20.7	17861.6	38.6
4	float32|none|MeshBP|single|simd	1577.6	25.0	23.6	15400.6	41.0
5	float32|none|step_sgd|single|simd	1479.6	25.0	22.9	16270.5	36.4
6	int8|none|sgd|single|simd	1452.8	25.0	27.3	16131.5	36.0
7	float32|none|Step[T][S]|single|simd	1445.2	25.0	23.5	14793.8	39.1
8	float32|none|step_tween_chain|single|simd	1389.1	25.0	23.3	15538.7	35.8
9	int8|none|tween_chain|single|simd	1352.6	25.0	21.9	14452.0	37.4
10	float32|none|Mesh[T]|single|simd	1329.1	25.0	33.2	14631.1	36.3
11	ternary|none|sgd|single|simd	1219.1	25.0	23.5	14163.1	34.4
12	float32|none|step_tween|single|simd	1219.1	25.0	23.6	13981.0	34.9
13	int8|none|Step[T][S]|single|simd	1217.4	25.0	27.9	12999.9	37.5
14	binary|none|sgd|single|simd	1217.3	25.0	24.6	14112.8	34.5
15	float32|none|Mesh[T]Chain|single|simd	1190.6	25.0	24.7	12455.8	38.2
16	int8|none|tween|single|simd	1183.8	25.0	28.7	13088.5	36.2
17	int4|none|sgd|single|simd	1180.4	25.0	22.4	14121.3	33.4
18	float32|none|[T][S][HP]|single|simd	1168.2	25.0	37.8	11272.4	41.5
19	int2|none|sgd|single|simd	1163.8	25.0	23.4	14010.1	33.2
20	float32|none|[T][S]|single|simd	1147.4	25.0	19.8	10843.4	42.3

Leaderboard (SoftAcc)

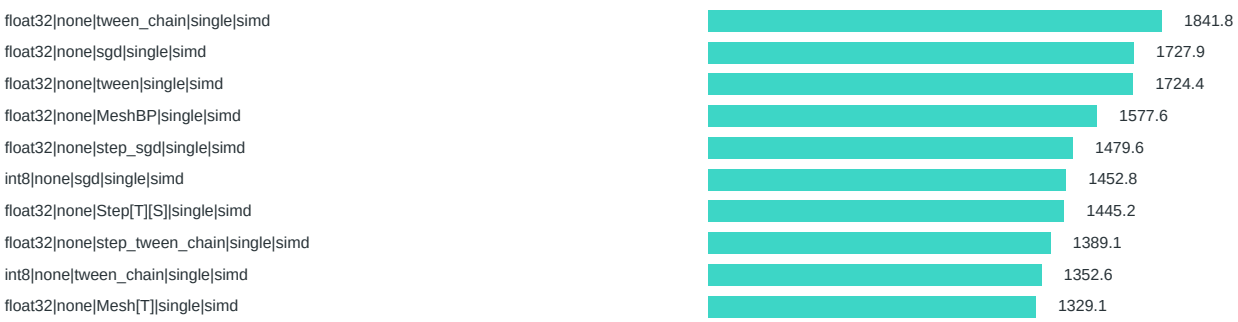
#	Cell	Score	Soft	Acc	Thru	Avail
1	binary|none|tween_chain|single|simd	993.4	25.0	27.8	11582.0	34.3

2	binary|none|tween|single|simd	971.3	25.0	22.9	12125.7	32.0
3	int2|none|MeshBP|single|simd	1015.6	25.0	32.8	11631.6	34.9
4	float32|none|Mesh[T]|single|simd	1329.1	25.0	33.2	14631.1	36.3
5	float32|none|[T][S][HP]|single|simd	1168.2	25.0	37.8	11272.4	41.5
6	ternary|none|Step[T][S]|single|simd	941.6	25.0	33.7	11526.0	32.7
7	int2|none|tween|single|simd	997.8	25.0	25.9	12453.8	32.0
8	int8|none|[T][S][HP]|single|simd	955.7	25.0	30.8	9297.0	41.1
9	int2|none|tween_chain|single|simd	1017.3	25.0	25.0	11636.6	35.0
10	float32|none|Mesh[T]Chain|single|simd	1190.6	25.0	24.7	12455.8	38.2
11	int4|none|Step[T][S]|single|simd	978.2	25.0	27.9	11786.6	33.2
12	float32|none|tween_chain|single|simd	1841.8	25.0	36.9	18321.8	40.2
13	float32|none|Step[T][S]|single|simd	1445.2	25.0	23.5	14793.8	39.1
14	int2|none|sgd|single|simd	1163.8	25.0	23.4	14010.1	33.2
15	float32|none|step_tween|single|simd	1219.1	25.0	23.6	13981.0	34.9
16	int8|none|sgd|single|simd	1452.8	25.0	27.3	16131.5	36.0
17	float32|none|sgd|single|simd	1727.9	25.0	28.5	18742.1	36.9
18	int8|none|step_tween_chain|single|simd	1106.4	25.0	24.7	12844.9	34.5
19	int8|none|Step[T][S]|single|simd	1217.4	25.0	27.9	12999.9	37.5
20	int8|none|tween_chain|single|simd	1352.6	25.0	21.9	14452.0	37.4

Leaderboard (hard Acc)

#	Cell	Score	Soft	Acc	Thru	Avail
1	float32|none|[T][S][HP]|single|simd	1168.2	25.0	37.8	11272.4	41.5
2	float32|none|tween_chain|single|simd	1841.8	25.0	36.9	18321.8	40.2
3	ternary|none|Step[T][S]|single|simd	941.6	25.0	33.7	11526.0	32.7
4	float32|none|Mesh[T]|single|simd	1329.1	25.0	33.2	14631.1	36.3
5	int2|none|MeshBP|single|simd	1015.6	25.0	32.8	11631.6	34.9
6	int8|none|[T][S][HP]|single|simd	955.7	25.0	30.8	9297.0	41.1
7	int8|none|step_tween|single|simd	964.7	25.0	29.1	12230.1	31.6
8	int8|none|tween|single|simd	1183.8	25.0	28.7	13088.5	36.2
9	float32|none|sgd|single|simd	1727.9	25.0	28.5	18742.1	36.9
10	int8|none|Step[T][S]|single|simd	1217.4	25.0	27.9	12999.9	37.5
11	int4|none|Step[T][S]|single|simd	978.2	25.0	27.9	11786.6	33.2
12	binary|none|tween_chain|single|simd	993.4	25.0	27.8	11582.0	34.3
13	int8|none|sgd|single|simd	1452.8	25.0	27.3	16131.5	36.0
14	binary|none|MeshBP|single|simd	1049.7	25.0	26.6	11587.8	36.2
15	int8|none|Mesh[T]Chain|single|simd	995.1	25.0	26.5	10547.1	37.7
16	int2|none|tween|single|simd	997.8	25.0	25.9	12453.8	32.0
17	int8|none|MeshBP|single|simd	1117.0	25.0	25.6	11935.8	37.4
18	int2|none|tween_chain|single|simd	1017.3	25.0	25.0	11636.6	35.0
19	int4|none|tween_chain|single|simd	1010.0	25.0	24.9	11529.3	35.0
20	int8|none|step_tween_chain|single|simd	1106.4	25.0	24.7	12844.9	34.5

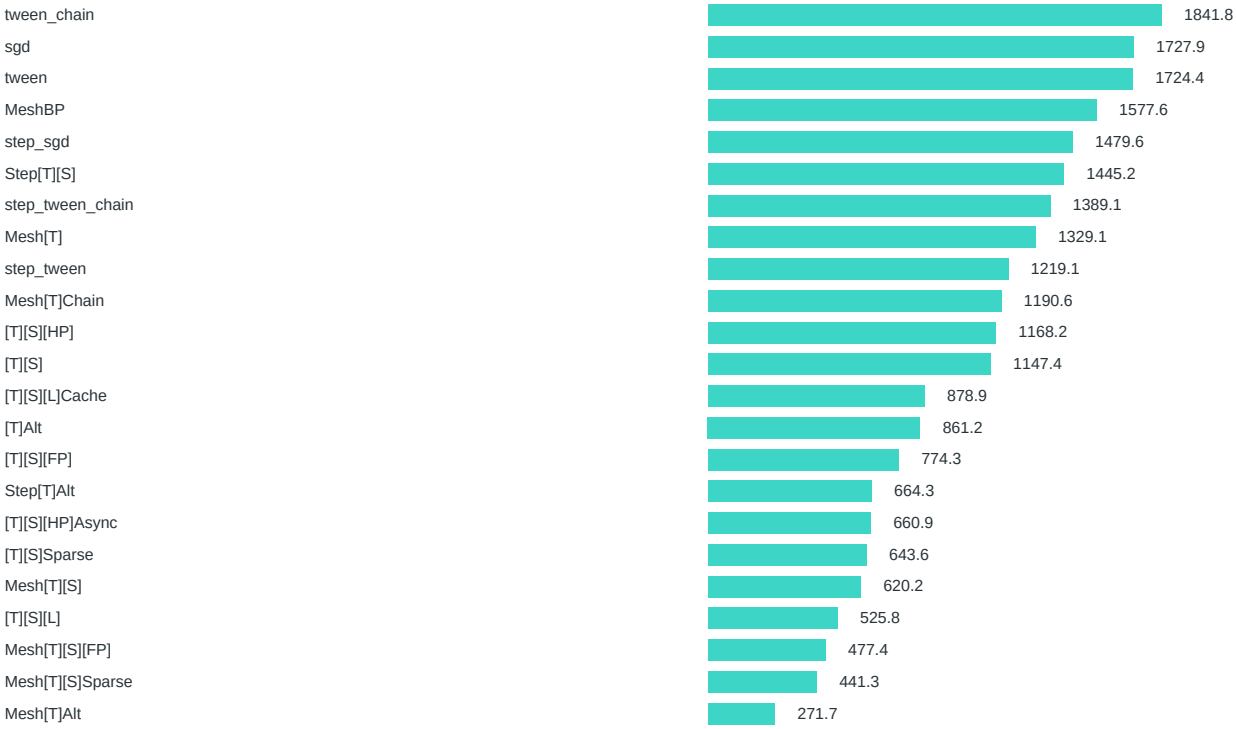
Top scores



ternary|none|sgd|single|simd



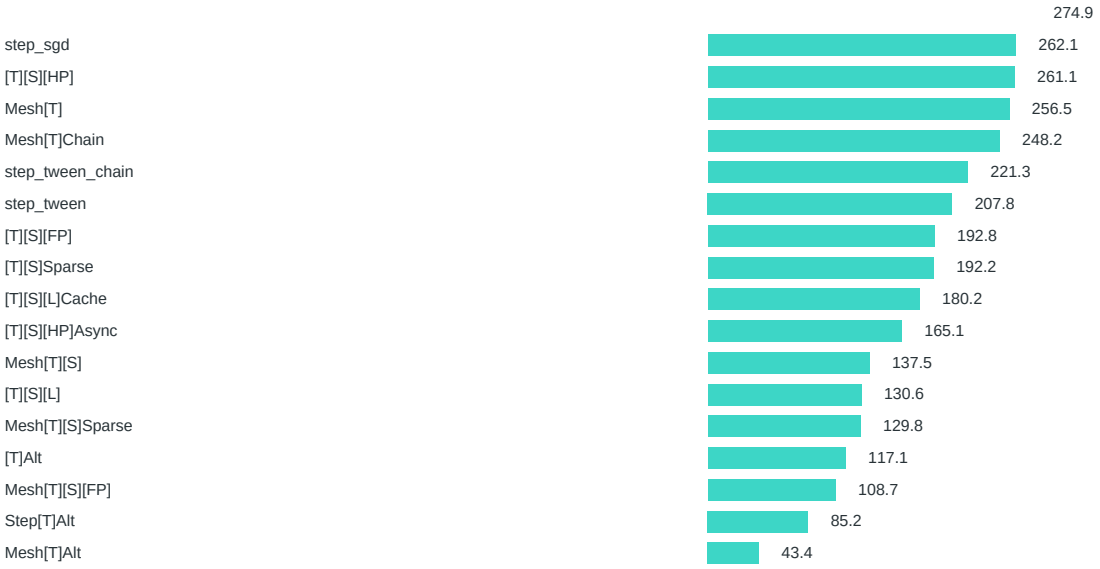
Best settings per mode



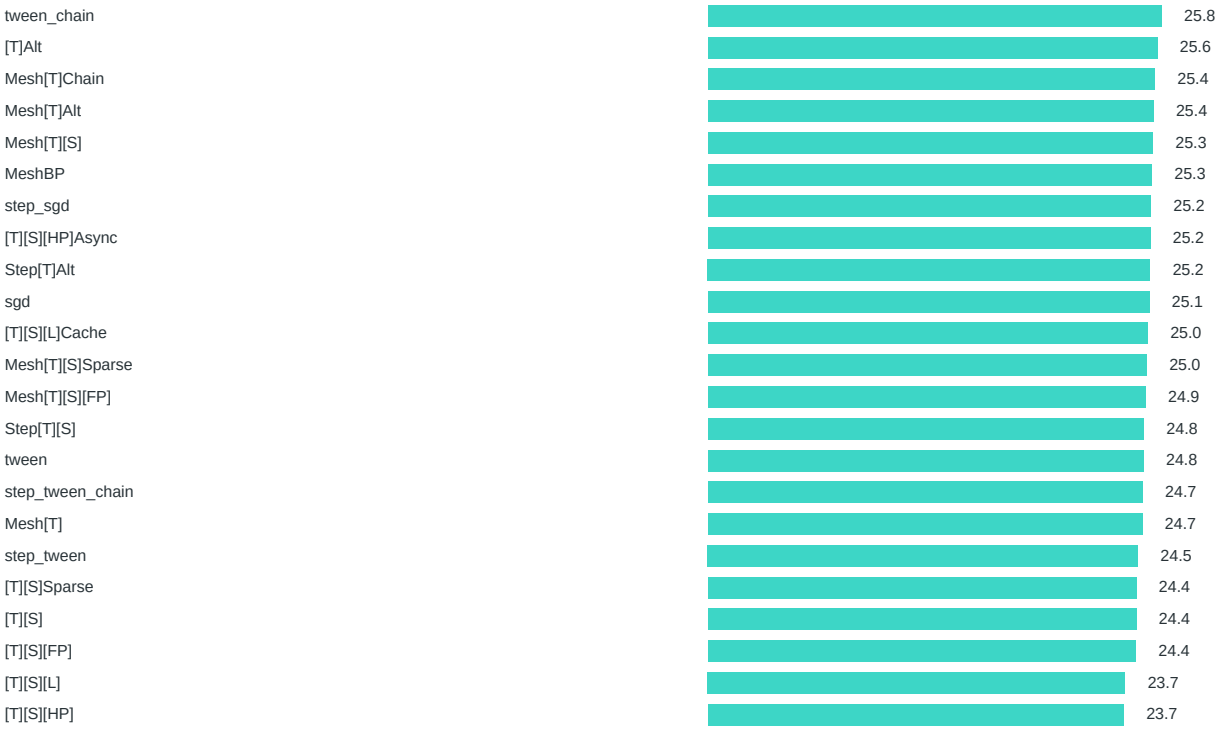
Mean Score by train mode



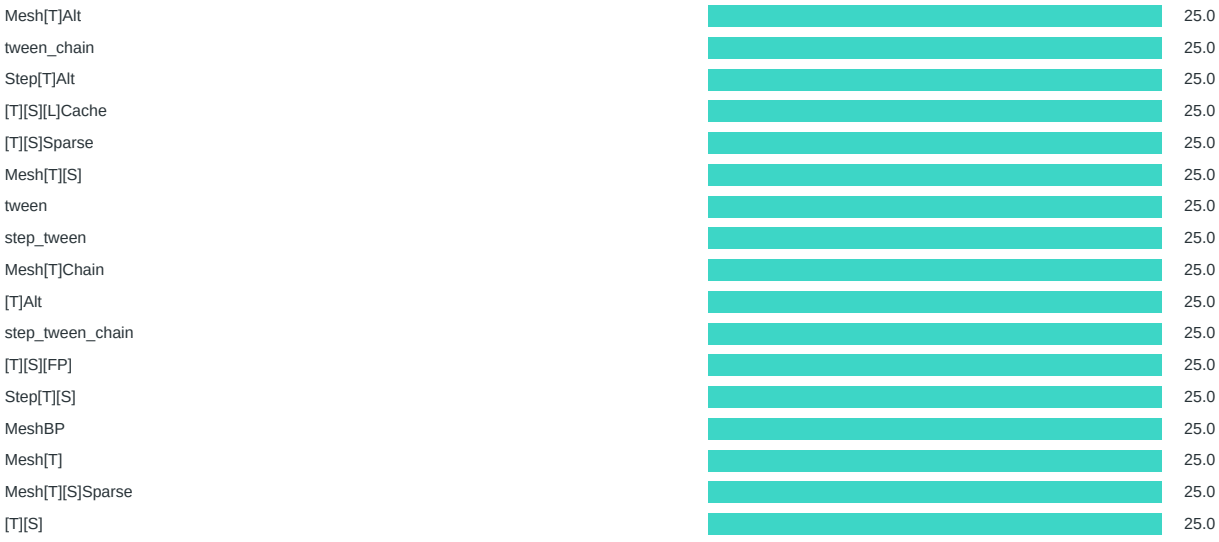
[T][S]



Mean hard Acc by train mode



Mean SoftAcc by train mode

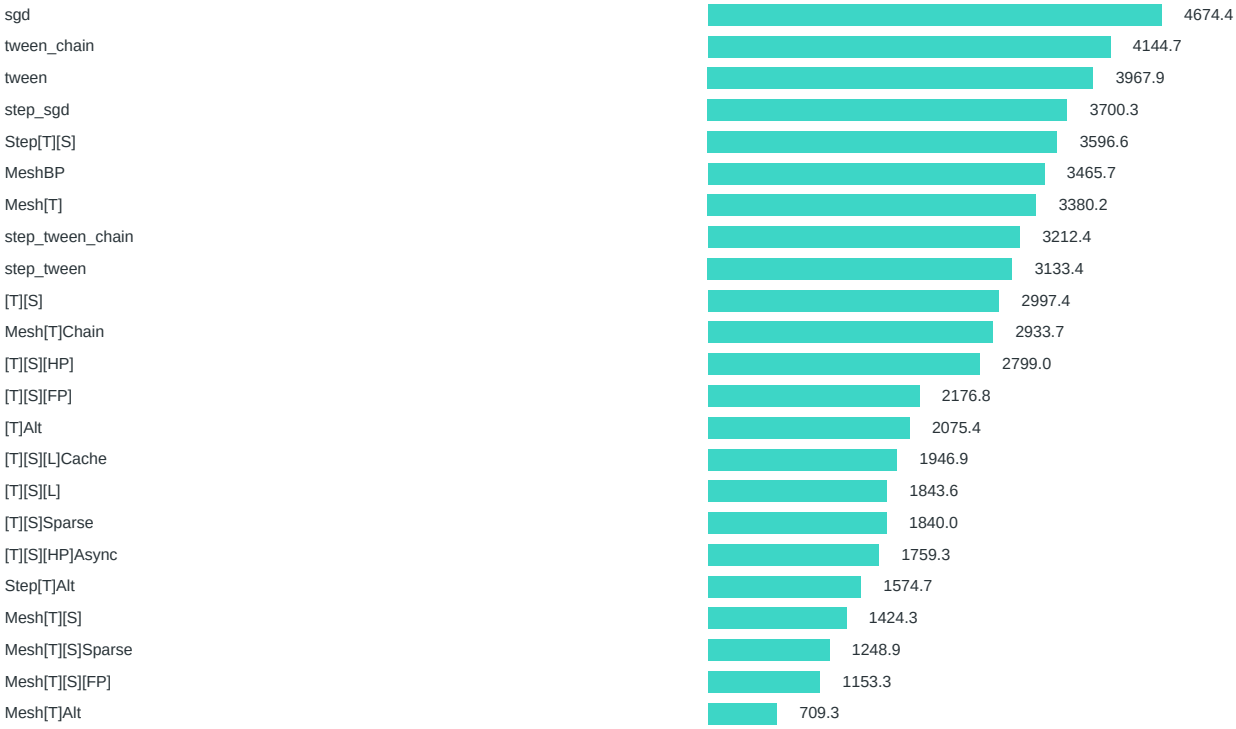




Mean Availability by train mode



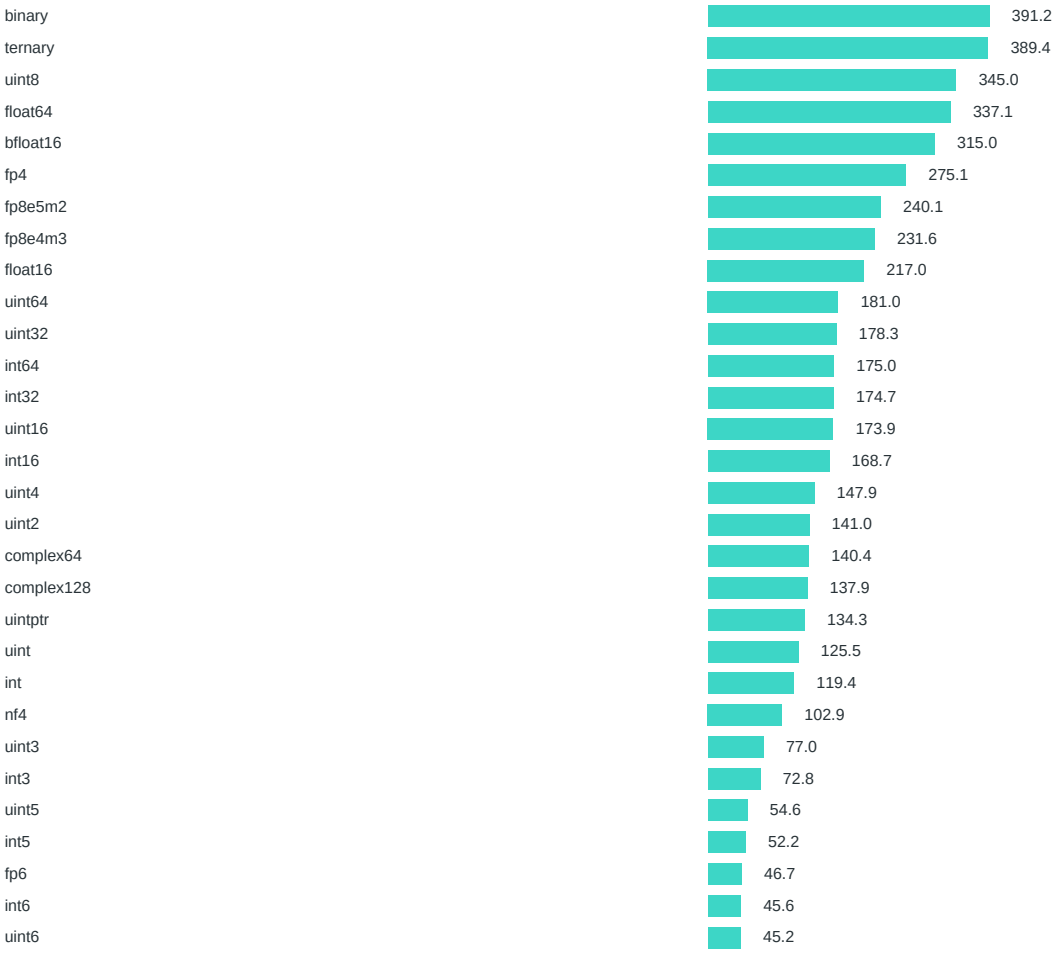
Mean Throughput by train mode



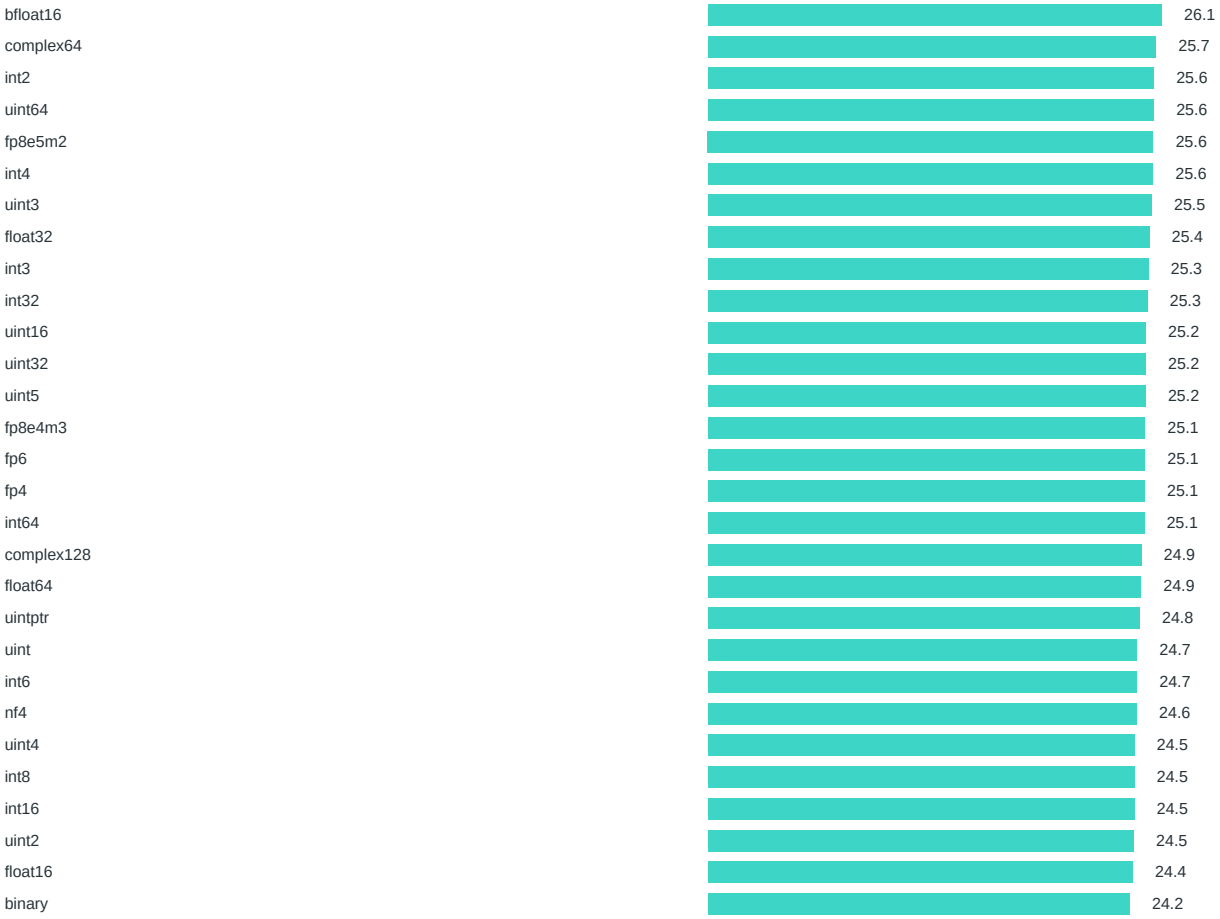
Mean Score by dtype



Mean Score by dtype



Mean hard Acc by dtype



Mean hard Acc by dtype



Mean Score by arch



Honesty - mean Score, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	398	584	189	206	305	863	409	369	60	378	300	163
Mesh[T]	387	568	177	152	186	860	433	408	48	334	343	149
Mesh[T]Alt	58	114	24	27	34	171	76	46	10	42	40	20
Mesh[T]Chain	381	453	137	159	343	686	443	295	54	270	338	120
Mesh[T][S]	162	284	97	96	147	451	164	149	27	181	131	104
Mesh[T][S][FP]	139	153	71	70	98	255	169	129	26	96	140	73
Mesh[T][S]Sparse	154	212	114	96	151	301	152	173	33	149	112	81
Step[T]Alt	135	164	36	39	59	389	144	104	14	67	79	32
Step[T][S]	585	440	149	170	316	835	360	371	54	274	306	163
[T]Alt	181	248	86	98	121	446	200	133	25	110	140	60
[T][S]	420	469	211	180	318	605	507	381	59	303	341	181
[T][S][FP]	244	360	180	176	174	405	337	216	66	228	280	122
[T][S][HP]	476	357	222	179	304	853	445	304	51	270	242	121
[T][S][HP]Async	210	230	110	108	191	467	306	211	36	192	208	73
[T][S][L]	166	221	86	84	105	399	279	178	34	156	127	69
[T][S][L]Cache	250	353	129	156	163	490	227	250	49	220	195	111
[T][S]Sparse	275	381	125	133	204	423	313	240	57	185	257	114
sgd	544	744	233	264	386	1167	608	494	95	384	410	234
step_sgd	444	562	154	160	253	807	448	375	53	322	283	139
step_tween	287	386	115	125	239	634	367	284	35	199	223	103
step_tween_chain	393	468	115	123	196	718	357	334	48	243	257	126
tween	505	567	171	203	367	880	436	427	64	322	353	181
tween_chain	453	681	242	225	330	1405	573	455	75	400	417	205

Honesty - mean Score, every mode x dtype (cols 13-24)

Honesty - mean Score, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	182	655	102	245	511	65	69	276	650	157	528	172
Mesh[T]	205	484	69	182	490	71	39	214	554	127	382	147
Mesh[T]Alt	27	105	16	35	86	11	9	26	113	21	83	22
Mesh[T]Chain	204	406	78	198	380	61	57	183	579	133	510	145
Mesh[T][S]	106	304	47	141	219	34	33	98	266	73	241	72
Mesh[T][S][FP]	92	253	36	101	224	35	18	120	248	44	172	58
Mesh[T][S]Sparse	117	255	54	113	259	31	30	99	282	61	244	108
Step[T]Alt	47	178	23	58	161	16	16	74	233	46	162	44
Step[T][S]	280	575	67	294	714	54	69	208	738	107	646	124
[T]Alt	80	199	41	75	261	29	23	100	216	62	239	61
[T][S]	233	515	118	228	431	87	60	246	450	122	493	173
[T][S][FP]	150	351	75	163	367	49	56	230	422	97	265	147
[T][S][HP]	261	521	93	234	521	59	49	190	696	115	450	169
[T][S][HP]Async	127	315	54	170	278	33	46	121	318	76	290	128
[T][S][L]	94	197	37	126	220	41	31	103	363	64	291	87
[T][S][L]Cache	150	275	76	152	319	52	49	138	375	113	380	118
[T][S]Sparse	160	431	89	134	390	51	43	162	352	91	359	99
sgd	334	688	131	313	720	106	83	365	973	222	736	233
step_sgd	192	477	83	210	445	66	51	221	568	132	467	180
step_tween	144	426	58	149	505	49	33	171	578	108	447	83
step_tween_chain	189	465	77	171	428	45	43	148	570	100	394	122
tween	236	667	102	218	660	58	64	251	764	121	568	177
tween_chain	268	682	148	308	648	97	76	279	732	174	610	219

Honesty - mean Score, every mode x dtype (cols 25-34)

Honesty - mean Score, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	202	209	100	239	154	70	81	295	510	170
Mesh[T]	161	151	91	212	160	61	59	165	446	207
Mesh[T]Alt	33	29	10	25	31	11	9	33	60	20
Mesh[T]Chain	219	190	72	169	195	79	52	247	461	142
Mesh[T][S]	131	108	52	145	91	34	35	124	234	90
Mesh[T][S][FP]	97	92	29	134	79	28	22	108	215	72
Mesh[T][S]Sparse	145	115	59	111	116	33	31	118	201	102
Step[T]Alt	70	54	28	65	54	14	10	72	155	56
Step[T][S]	202	177	92	203	211	69	58	205	429	200
[T]Alt	97	64	44	85	55	28	22	120	174	56
[T][S]	293	194	120	279	201	86	64	257	479	238
[T][S][FP]	178	111	65	194	112	60	45	188	317	129
[T][S][HP]	207	163	97	184	237	63	51	237	262	196
[T][S][HP]Async	190	102	65	230	114	43	30	148	293	100
[T][S][L]	103	86	56	93	100	33	25	115	212	58
[T][S][L]Cache	152	116	56	179	153	49	33	158	306	132
[T][S]Sparse	176	149	93	172	150	62	37	157	340	132
sgd	328	257	149	334	245	113	98	308	615	219
step_sgd	175	199	91	215	203	68	56	212	468	131
step_tween	144	118	63	141	124	45	43	150	379	111
step_tween_chain	152	147	75	151	135	65	45	168	343	112
tween	217	200	106	243	234	75	55	270	452	200
tween_chain	326	211	156	297	248	66	81	306	584	217

Honesty - mean hard Acc, every mode x dtype (cols 1-12)

Honesty - mean hard Acc, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	26	24	26	25	26	25	23	25	24	28	25	25
Mesh[T]	25	28	26	24	20	25	27	25	24	26	29	28
Mesh[T]Alt	27	33	21	25	22	27	25	26	31	25	26	21
Mesh[T]Chain	28	24	23	22	30	26	28	24	24	24	29	22
Mesh[T][S]	21	27	25	28	28	31	22	23	22	34	22	27
Mesh[T][S][FP]	24	20	25	22	24	22	25	25	24	22	28	25
Mesh[T][S]Sparse	22	22	31	24	27	24	20	25	25	26	19	23
Step[T]Alt	32	24	18	25	20	27	26	29	21	20	23	21
Step[T][S]	30	19	23	25	25	24	22	24	23	25	23	25
[T]Alt	28	25	28	36	28	28	26	27	28	21	29	21
[T][S]	26	20	25	24	27	23	27	26	23	24	23	28
[T][S][FP]	22	25	25	31	21	21	27	22	31	25	33	23
[T][S][HP]	33	18	29	26	24	27	25	25	22	24	21	18
[T][S][HP]Async	24	21	26	27	26	28	27	27	22	27	30	17
[T][S][L]	23	21	25	24	19	26	28	24	25	29	24	22
[T][S][L]Cache	26	28	27	28	22	23	21	27	29	26	24	24
[T][S]Sparse	26	27	23	22	25	21	27	24	28	22	28	21
sgd	26	26	22	25	25	28	25	25	26	24	25	26
step_sgd	27	25	24	26	25	26	26	25	26	28	24	25
step_tween	25	23	25	27	27	22	25	25	25	22	26	24
step_tween_chain	27	26	23	25	23	25	22	25	25	26	27	28
tween	27	24	25	28	25	23	24	25	25	24	24	26
tween_chain	25	27	28	25	24	31	25	25	25	24	27	24

Honesty - mean hard Acc, every mode x dtype (cols 13-24)

Honesty - mean hard Acc, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	21	26	27	26	27	22	28	27	25	27	26	28
Mesh[T]	24	28	22	25	25	27	18	24	24	23	21	25
Mesh[T]Alt	23	31	26	26	29	28	30	22	22	29	23	23
Mesh[T]Chain	25	23	27	26	23	26	28	21	25	28	29	24
Mesh[T][S]	23	31	25	29	22	23	26	20	24	25	24	20
Mesh[T][S][FP]	25	32	24	27	26	28	17	31	27	19	23	22
Mesh[T][S]Sparse	25	27	26	24	27	21	24	23	24	20	26	32
Step[T]Alt	20	22	25	24	27	23	28	31	27	32	27	22
Step[T][S]	32	26	22	28	32	21	27	24	25	21	26	21
[T]Alt	27	23	28	22	29	24	24	27	20	29	26	21
[T][S]	26	25	24	22	23	24	24	25	22	20	23	25
[T][S][FP]	24	23	25	24	26	23	28	28	23	26	16	28
[T][S][HP]	26	25	24	26	27	21	18	23	30	22	26	24
[T][S][HP]Async	23	24	24	29	25	20	29	20	23	23	24	29
[T][S][L]	25	19	20	28	22	26	25	22	29	25	25	25
[T][S][L]Cache	24	23	28	24	25	24	26	26	23	29	26	27
[T][S]Sparse	24	30	29	20	29	23	22	24	22	20	24	18
sgd	27	23	25	25	24	23	24	28	29	25	25	24
step_sgd	24	24	23	25	21	27	25	28	24	25	21	29
step_tween	24	24	25	27	25	24	22	28	26	26	23	21
step_tween_chain	25	25	26	25	23	24	25	23	25	23	23	25
tween	24	28	25	24	27	20	25	27	25	22	25	26
tween_chain	25	27	31	26	25	27	26	25	23	27	23	28

Honesty - mean hard Acc, every mode x dtype (cols 25-34)

Honesty - mean hard Acc, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	21	26	24	25	19	23	29	29	27	25
Mesh[T]	22	21	29	24	25	23	25	22	27	31
Mesh[T]Alt	26	27	19	22	28	26	30	23	21	22
Mesh[T]Chain	28	25	22	21	26	30	25	28	26	25
Mesh[T][S]	26	28	27	27	23	24	29	25	23	26
Mesh[T][S][FP]	25	29	20	32	22	25	23	27	29	26
Mesh[T][S]Sparse	32	29	27	24	27	24	23	26	22	30
Step[T]Alt	28	27	31	27	30	23	18	26	24	29
Step[T][S]	25	25	28	23	28	24	23	25	21	28
[T]Alt	25	23	28	27	17	25	24	33	23	21
[T][S]	27	24	24	25	26	24	20	25	27	29
[T][S][FP]	23	18	23	23	20	28	25	24	22	22
[T][S][HP]	22	22	25	19	25	25	21	24	14	25
[T][S][HP]Async	32	23	26	33	26	26	20	26	26	23
[T][S][L]	22	24	26	21	24	24	20	25	23	16
[T][S][L]Cache	25	19	20	28	28	26	19	26	22	27
[T][S]Sparse	25	25	29	26	25	28	17	22	29	23
sgd	26	25	25	26	23	25	26	24	25	23
step_sgd	21	28	25	26	27	28	25	24	24	23
step_tween	26	23	24	24	22	24	24	25	25	23
step_tween_chain	24	25	27	24	23	28	24	26	25	22
tween	22	24	25	25	25	25	22	27	23	26
tween_chain	28	23	32	26	25	19	26	26	26	26

Honesty - mean SoftAcc, every mode x dtype (cols 1-12)

Honesty - mean SoftAcc, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T]	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T]Alt	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T]Chain	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T][S]	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T][S][FP]	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T][S]Sparse	25	25	25	25	25	25	25	25	25	25	25	25
Step[T]Alt	25	25	25	25	25	25	25	25	25	25	25	25
Step[T][S]	25	25	25	25	25	25	25	25	25	25	25	25
[T]Alt	25	25	25	25	25	25	25	25	25	25	25	25
[T][S]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][FP]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][HP]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][HP]Async	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][L]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][L]Cache	25	25	25	25	25	25	25	25	25	25	25	25
[T][S]Sparse	25	25	25	25	25	25	25	25	25	25	25	25
sgd	25	25	25	25	25	25	25	25	25	25	25	25
step_sgd	25	25	25	25	25	25	25	25	25	25	25	25
step_tween	25	25	25	25	25	25	25	25	25	25	25	25
step_tween_chain	25	25	25	25	25	25	25	25	25	25	25	25
tween	25	25	25	25	25	25	25	25	25	25	25	25
tween_chain	25	25	25	25	25	25	25	25	25	25	25	25

Honesty - mean SoftAcc, every mode x dtype (cols 13-24)

Honesty - mean SoftAcc, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T]	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T]Alt	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T]Chain	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T][S]	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T][S][FP]	25	25	25	25	25	25	25	25	25	25	25	25
Mesh[T][S]Sparse	25	25	25	25	25	25	25	25	25	25	25	25
Step[T]Alt	25	25	25	25	25	25	25	25	25	25	25	25
Step[T][S]	25	25	25	25	25	25	25	25	25	25	25	25
[T]Alt	25	25	25	25	25	25	25	25	25	25	25	25
[T][S]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][FP]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][HP]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][HP]Async	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][L]	25	25	25	25	25	25	25	25	25	25	25	25
[T][S][L]Cache	25	25	25	25	25	25	25	25	25	25	25	25
[T][S]Sparse	25	25	25	25	25	25	25	25	25	25	25	25
sgd	25	25	25	25	25	25	25	25	25	25	25	25
step_sgd	25	25	25	25	25	25	25	25	25	25	25	25
step_tween	25	25	25	25	25	25	25	25	25	25	25	25
step_tween_chain	25	25	25	25	25	25	25	25	25	25	25	25
tween	25	25	25	25	25	25	25	25	25	25	25	25
tween_chain	25	25	25	25	25	25	25	25	25	25	25	25

Honesty - mean SoftAcc, every mode x dtype (cols 25-34)

Honesty - mean SoftAcc, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	25	25	25	25	25	25	25	25	25	25
Mesh[T]	25	25	25	25	25	25	25	25	25	25
Mesh[T]Alt	25	25	25	25	25	25	25	25	25	25
Mesh[T]Chain	25	25	25	25	25	25	25	25	25	25
Mesh[T][S]	25	25	25	25	25	25	25	25	25	25
Mesh[T][S][FP]	25	25	25	25	25	25	25	25	25	25
Mesh[T][S]Sparse	25	25	25	25	25	25	25	25	25	25
Step[T]Alt	25	25	25	25	25	25	25	25	25	25
Step[T][S]	25	25	25	25	25	25	25	25	25	25
[T]Alt	25	25	25	25	25	25	25	25	25	25
[T][S]	25	25	25	25	25	25	25	25	25	25
[T][S][FP]	25	25	25	25	25	25	25	25	25	25
[T][S][HP]	25	25	25	25	25	25	25	25	25	25
[T][S][HP]Async	25	25	25	25	25	25	25	25	25	25
[T][S][L]	25	25	25	25	25	25	25	25	25	25
[T][S][L]Cache	25	25	25	25	25	25	25	25	25	25
[T][S]Sparse	25	25	25	25	25	25	25	25	25	25
sgd	25	25	25	25	25	25	25	25	25	25
step_sgd	25	25	25	25	25	25	25	25	25	25
step_tween	25	25	25	25	25	25	25	25	25	25
step_tween_chain	25	25	25	25	25	25	25	25	25	25
tween	25	25	25	25	25	25	25	25	25	25
tween_chain	25	25	25	25	25	25	25	25	25	25

Honesty - mean Avail, every mode x dtype (cols 1-12)

Honesty - mean Avail, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	32	33	29	29	32	38	34	30	26	32	32	30
Mesh[T]	31	30	26	27	29	35	32	29	24	30	30	27
Mesh[T]Alt	22	23	21	20	21	26	24	20	17	23	21	20
Mesh[T]Chain	33	33	29	30	32	36	34	30	26	32	33	29
Mesh[T][S]	38	39	36	36	38	41	40	35	30	37	38	36
Mesh[T][S][FP]	38	38	36	37	38	39	40	35	30	37	38	36
Mesh[T][S]Sparse	42	43	42	42	44	47	44	41	36	45	43	41
Step[T]Alt	20	21	18	17	19	25	22	18	15	19	20	17
Step[T][S]	32	32	28	27	29	37	33	30	24	30	30	27
[T]Alt	22	23	21	20	22	26	26	20	17	21	22	20
[T][S]	39	39	35	37	38	40	42	34	31	39	38	35
[T][S][FP]	38	38	36	36	37	39	41	35	30	38	37	35
[T][S][HP]	37	38	36	35	39	40	41	35	29	38	38	36
[T][S][HP]Async	38	38	35	36	39	39	41	34	30	38	37	35
[T][S][L]	29	30	28	28	29	35	35	28	24	29	29	27
[T][S][L]Cache	37	38	35	36	37	40	41	35	30	38	38	35
[T][S]Sparse	43	44	42	43	43	46	45	41	36	44	44	42
sgd	32	33	31	31	32	36	36	31	27	32	33	31
step_sgd	29	29	25	25	27	33	30	27	22	28	28	24
step_tween	27	27	23	23	26	32	29	25	19	26	26	23
step_tween_chain	28	29	24	24	27	33	31	26	21	27	27	24
tween	32	31	26	27	31	36	32	29	24	30	31	27
tween_chain	31	33	30	30	33	37	35	31	26	33	32	29

Honesty - mean Avail, every mode x dtype (cols 13-24)

Honesty - mean Avail, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	31	32	26	31	32	26	26	31	36	27	33	29
Mesh[T]	28	30	24	28	31	24	23	29	33	26	31	26
Mesh[T]Alt	21	23	18	21	22	18	17	21	25	18	22	19
Mesh[T]Chain	31	33	26	31	31	25	25	32	35	27	33	29
Mesh[T][S]	37	38	31	38	37	31	31	38	39	33	39	35
Mesh[T][S][FP]	38	38	32	37	39	31	31	38	40	32	38	35
Mesh[T][S]Sparse	43	43	38	43	43	35	35	43	45	40	44	41
Step[T]Alt	18	21	16	18	20	15	15	18	22	16	21	17
Step[T][S]	29	32	25	29	33	24	24	29	35	25	32	28
[T]Alt	20	22	19	21	22	18	17	21	25	19	23	20
[T][S]	37	38	32	37	38	31	30	38	38	33	38	35
[T][S][FP]	37	37	32	37	38	31	30	38	40	32	38	35
[T][S][HP]	38	38	32	37	38	31	31	37	40	32	38	35
[T][S][HP]Async	37	38	32	38	37	30	31	37	39	32	38	35
[T][S][L]	28	29	25	29	29	25	24	29	32	25	30	27
[T][S][L]Cache	37	38	32	37	38	30	30	36	39	33	38	35
[T][S]Sparse	44	44	38	43	44	36	35	43	46	40	44	42
sgd	32	33	28	32	33	28	27	32	34	30	33	30
step_sgd	26	28	23	26	29	21	21	27	31	24	28	24
step_tween	24	27	20	24	28	20	19	24	28	22	28	22
step_tween_chain	27	29	22	27	28	21	21	25	31	23	28	23
tween	29	31	26	28	32	24	24	29	34	25	30	26
tween_chain	31	33	27	31	33	27	26	31	36	27	33	29

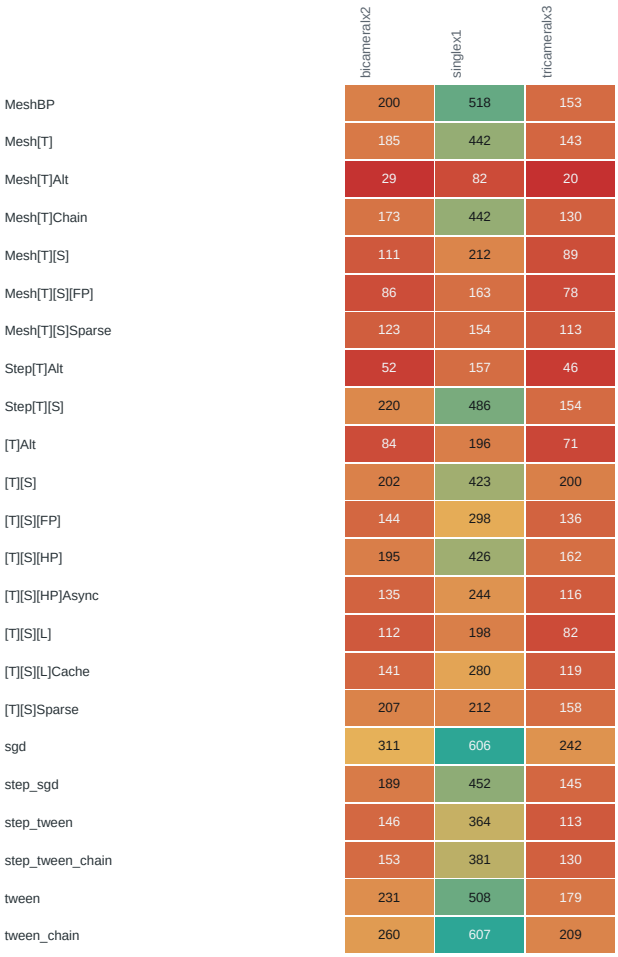
Honesty - mean Avail, every mode x dtype (cols 25-34)

Honesty - mean Avail, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	30	29	27	30	30	26	26	31	33	28
Mesh[T]	28	27	24	28	27	24	24	28	31	27
Mesh[T]Alt	21	20	18	20	20	17	17	21	24	19
Mesh[T]Chain	31	30	26	31	30	28	25	30	34	29
Mesh[T][S]	37	37	32	37	37	30	30	37	39	35
Mesh[T][S][FP]	37	36	31	38	36	29	29	37	39	35
Mesh[T][S]Sparse	43	43	38	43	42	36	36	43	44	42
Step[T]Alt	19	18	16	18	17	15	15	19	22	18
Step[T][S]	28	28	25	29	28	24	24	28	33	27
[T]Alt	21	20	18	20	20	17	17	21	24	20
[T][S]	37	36	32	38	36	31	31	38	40	36
[T][S][FP]	38	35	31	38	36	30	29	37	40	35
[T][S][HP]	38	36	32	38	36	30	30	37	40	35
[T][S][HP]Async	37	36	32	37	35	30	30	37	40	35
[T][S][L]	28	26	25	28	27	25	24	28	32	27
[T][S][L]Cache	37	35	31	37	36	30	30	36	40	35
[T][S]Sparse	44	42	38	43	43	36	36	44	44	42
sgd	31	31	28	32	31	28	27	31	34	30
step_sgd	27	26	23	27	26	21	21	27	30	24
step_tween	23	23	21	24	23	19	20	24	28	23
step_tween_chain	25	25	21	26	25	22	22	26	29	24
tween	29	27	25	28	28	24	24	28	31	27
tween_chain	32	30	27	31	30	26	26	31	34	30

Mean Score, every mode x arch

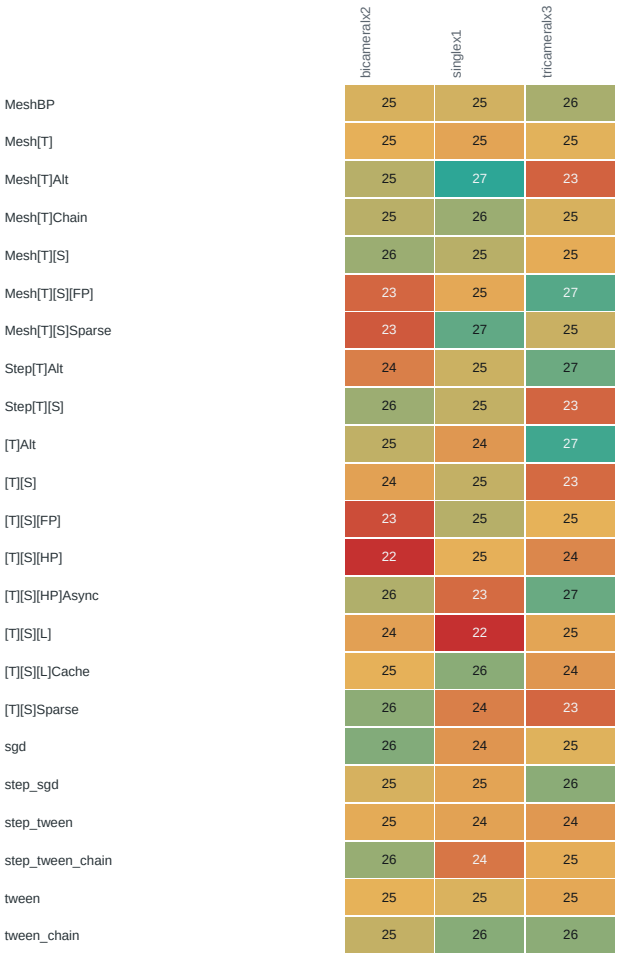
Mean Score, every mode x arch



	bicameralx2	singlex1	tricameralx3
MeshBP	200	518	153
Mesh[T]	185	442	143
Mesh[T]Alt	29	82	20
Mesh[T]Chain	173	442	130
Mesh[T][S]	111	212	89
Mesh[T][S][FP]	86	163	78
Mesh[T][S]Sparse	123	154	113
Step[T]Alt	52	157	46
Step[T][S]	220	486	154
[T]Alt	84	196	71
[T][S]	202	423	200
[T][S][FP]	144	298	136
[T][S][HP]	195	426	162
[T][S][HP]Async	135	244	116
[T][S][L]	112	198	82
[T][S][L]Cache	141	280	119
[T][S]Sparse	207	212	158
sgd	311	606	242
step_sgd	189	452	145
step_tween	146	364	113
step_tween_chain	153	381	130
tween	231	508	179
tween_chain	260	607	209

Mean hard Acc, every mode x arch

Mean hard Acc, every mode x arch



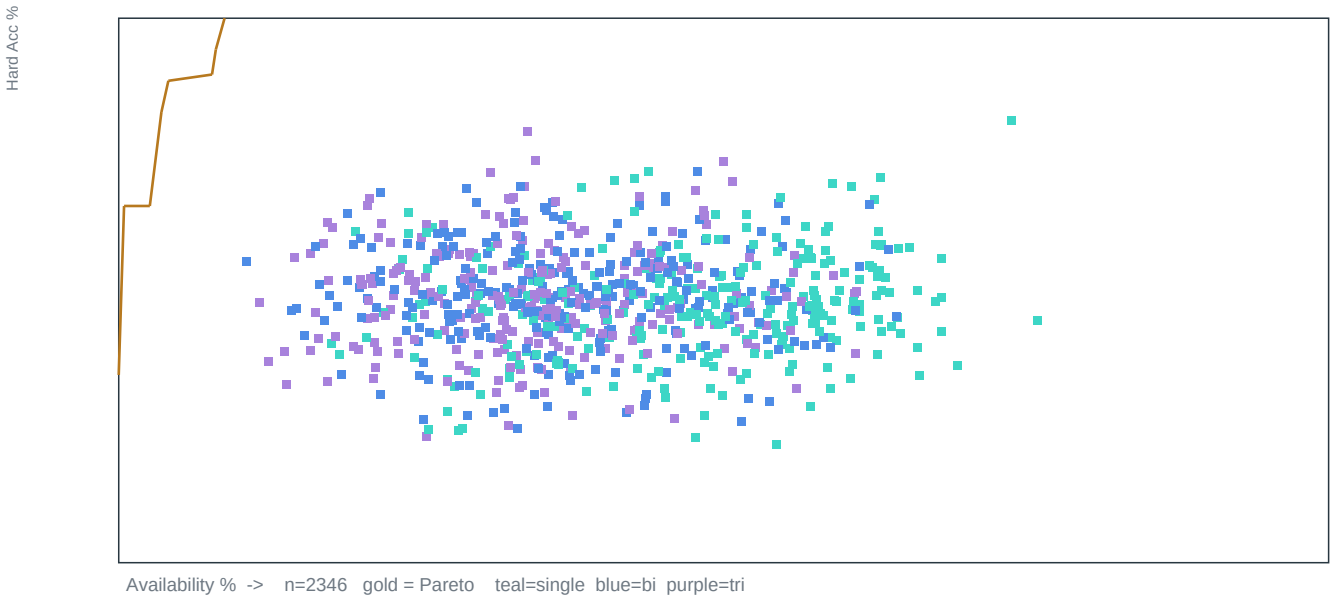
	bicameralx2	singlex1	tricameralx3
MeshBP	25	25	26
Mesh[T]	25	25	25
Mesh[T]Alt	25	27	23
Mesh[T]Chain	25	26	25
Mesh[T][S]	26	25	25
Mesh[T][S][FP]	23	25	27
Mesh[T][S]Sparse	23	27	25
Step[T]Alt	24	25	27
Step[T][S]	26	25	23
[T]Alt	25	24	27
[T][S]	24	25	23
[T][S][FP]	23	25	25
[T][S][HP]	22	25	24
[T][S][HP]Async	26	23	27
[T][S][L]	24	22	25
[T][S][L]Cache	25	26	24
[T][S]Sparse	26	24	23
sgd	26	24	25
step_sgd	25	25	26
step_tween	25	24	24
step_tween_chain	26	24	25
tween	25	25	25
tween_chain	25	26	26

Mean Avail, every mode x arch

Mean Avail, every mode x arch

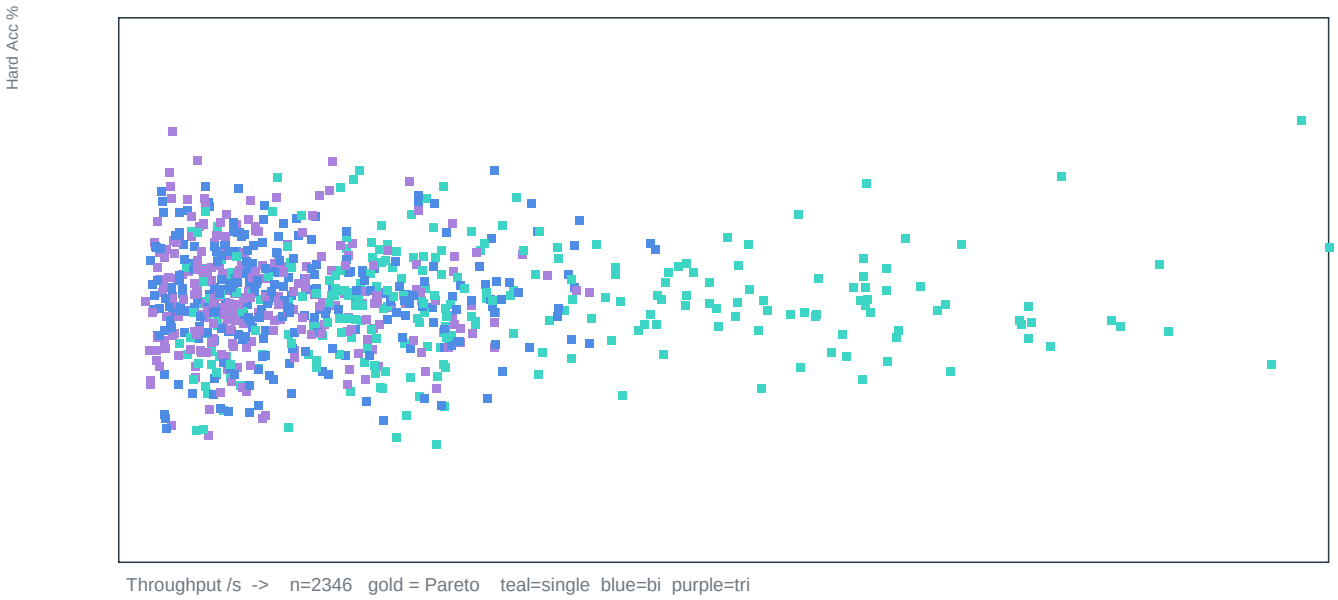
	bicameralx2	singlex1	tricameralx3
MeshBP	29	34	28
Mesh[T]	27	30	26
Mesh[T]Alt	20	23	19
Mesh[T]Chain	29	33	28
Mesh[T][S]	35	37	35
Mesh[T][S][FP]	36	37	35
Mesh[T][S]Sparse	44	37	44
Step[T]Alt	18	20	17
Step[T][S]	28	31	27
[T]Alt	20	22	19
[T][S]	36	37	35
[T][S][FP]	35	37	35
[T][S][HP]	36	37	35
[T][S][HP]Async	36	37	35
[T][S][L]	28	29	27
[T][S][L]Cache	35	37	35
[T][S]Sparse	44	37	44
sgd	30	33	30
step_sgd	25	29	24
step_tween	23	27	22
step_tween_chain	25	29	24
tween	28	31	27
tween_chain	30	34	28

Pillars - Availability vs hard Acc

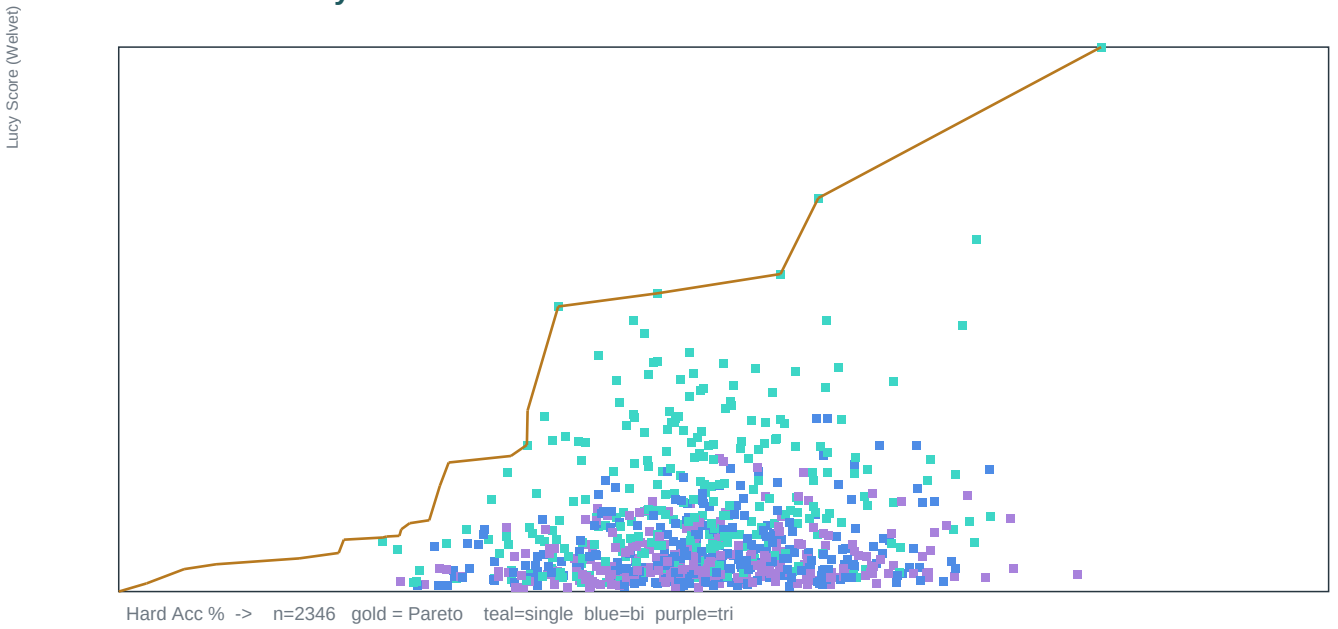


Pillars - Throughput vs hard Acc

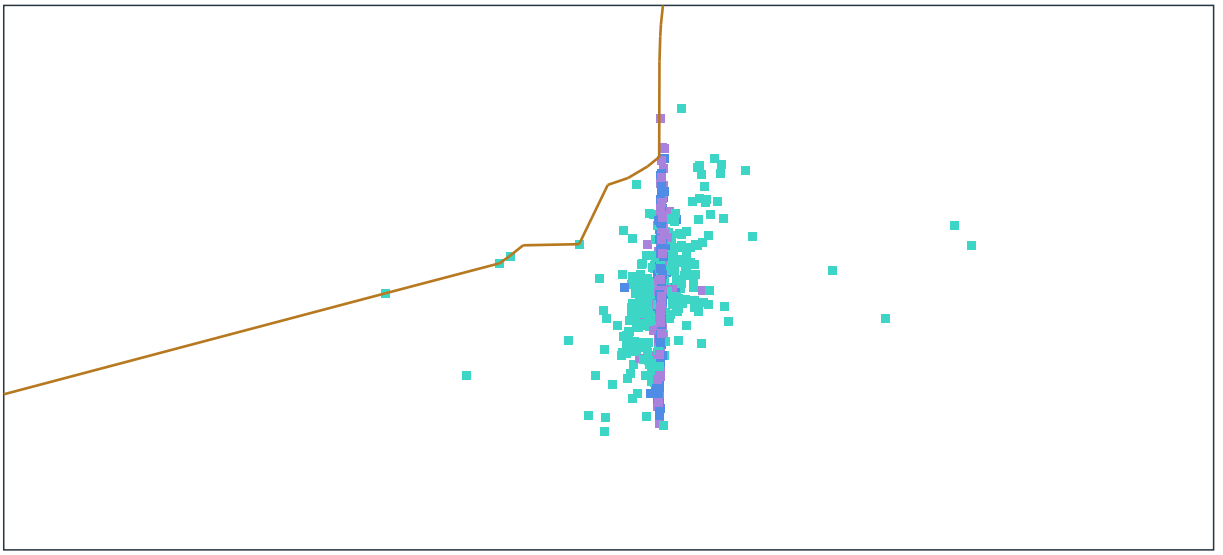
Pillars - Throughput vs hard Acc



Pareto - hard Acc vs Lucy Score

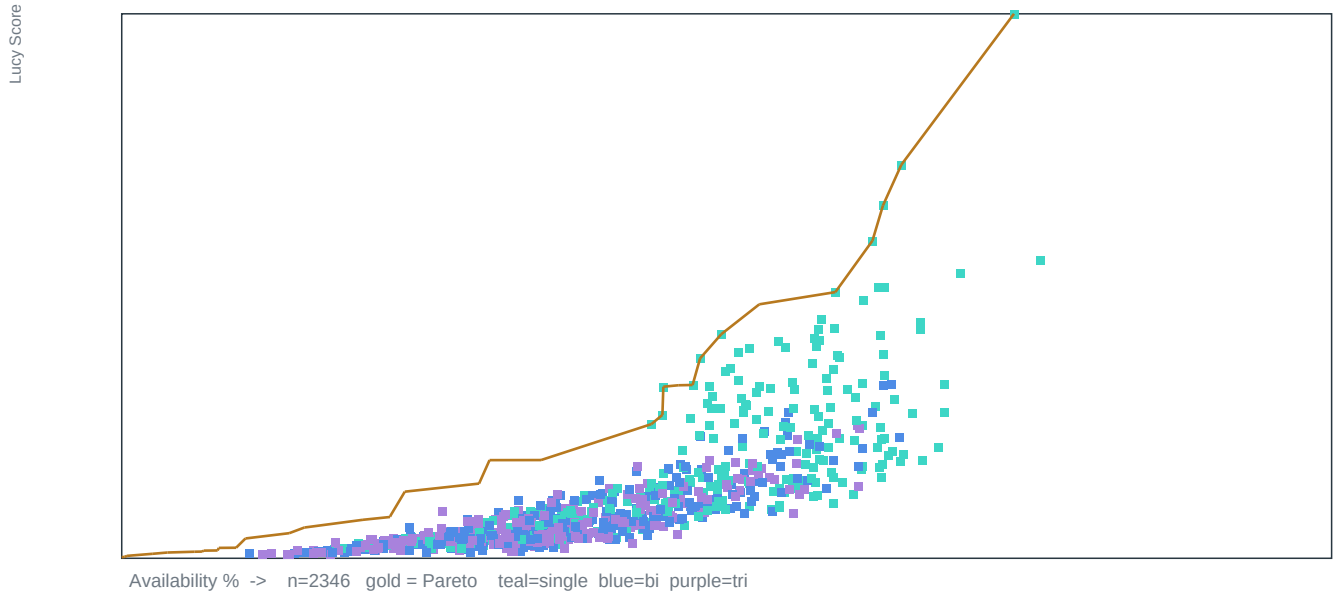


SoftAcc (serve-confidence) vs hard Acc

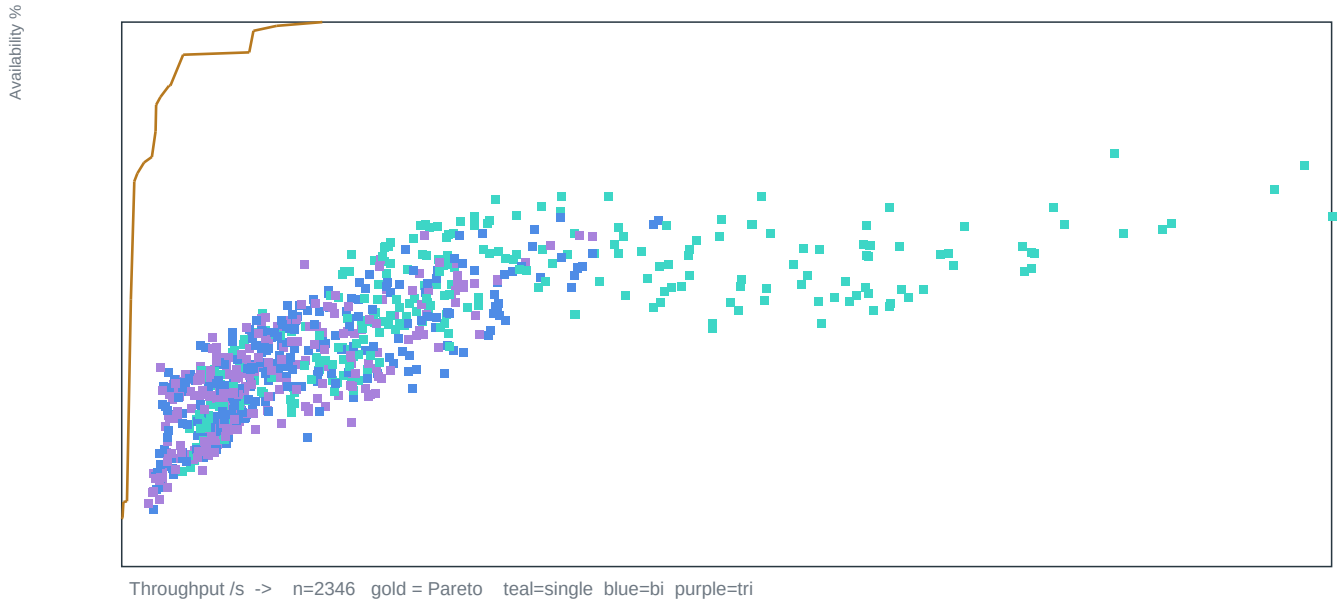



SoftAcc % -> n=2346 gold = Pareto teal=single blue=bi purple=tri
Hard Acc %

Avail vs Lucy Score (duty clock)



Pillars - Throughput vs Availability



AdaptPct vs hard Acc



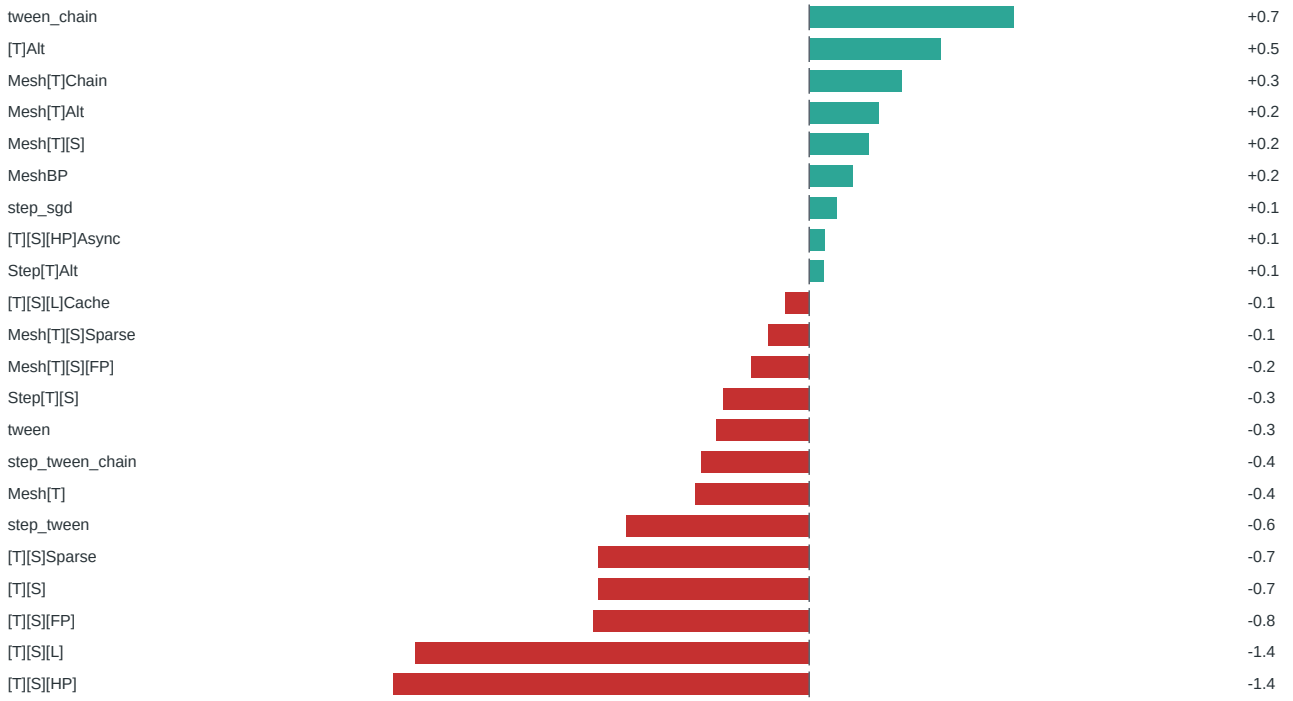

AdaptPct % -> n=2346 gold = Pareto teal=single blue=bi purple=tri
Hard Acc %

vs sgd - matched dtype x format x arch

AccDelta is the honest column. ScoreDelta is usually Availability (duty clock), not a better chain rule. Acc win = AccDelta > 0.5. Score win = ScoreDelta > 1. Baseline is discovered from the board, not a frozen StepBP list.

mode	n	AccD	Acc win%	SoftD	AvailD	ThruD	ScoreD	Score win%
tween_chain	102	+0.7	53	+0.0	-0.6	-530	-27.5	29
[T]Alt	102	+0.5	51	+0.0	-10.5	-2599	-269.2	0
Mesh[T]Chain	102	+0.3	48	+0.0	-0.9	-1741	-138.0	4
Mesh[T]Alt	102	+0.2	46	+0.0	-10.5	-3965	-342.9	0
Mesh[T][S]	102	+0.2	44	+0.0	+4.8	-3250	-248.8	0
MeshBP	102	+0.2	49	+0.0	-0.9	-1209	-96.1	8
step_sgd	102	+0.1	49	+0.0	-5.1	-974	-124.2	0
[T][S][HP]Async	102	+0.1	47	+0.0	+4.5	-2915	-221.2	0
Step[T]Alt	102	+0.1	48	+0.0	-12.8	-3100	-301.0	0
[T][S][L]Cache	102	-0.1	42	+0.0	+4.3	-2727	-206.1	1
Mesh[T][S]Sparse	102	-0.1	45	+0.0	+10.5	-3426	-256.4	0
Mesh[T][S][FP]	102	-0.2	47	+0.0	+4.7	-3521	-277.6	0
Step[T][S]	102	-0.3	37	+0.0	-2.4	-1078	-99.7	8
tween	102	-0.3	46	+0.0	-2.8	-707	-80.1	8
step_tween_chain	102	-0.4	43	+0.0	-5.6	-1462	-165.0	0
Mesh[T]	102	-0.4	44	+0.0	-3.3	-1294	-129.8	3
step_tween	102	-0.6	36	+0.0	-7.0	-1541	-178.5	0
[T][S]Sparse	102	-0.7	42	+0.0	+10.6	-2834	-194.1	5
[T][S]	102	-0.7	42	+0.0	+4.9	-1677	-111.4	12
[T][S][FP]	102	-0.8	38	+0.0	+4.5	-2498	-193.5	2
[T][S][L]	102	-1.4	37	+0.0	-3.1	-2831	-255.6	0
[T][S][HP]	102	-1.4	41	+0.0	+4.7	-1875	-125.2	8

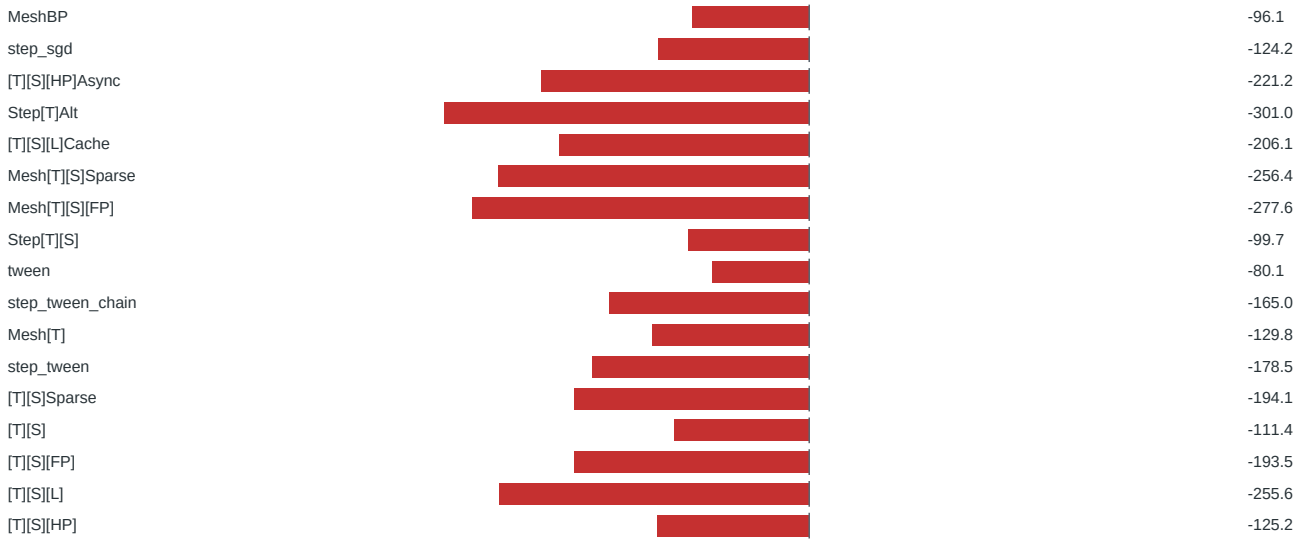
mean AccD vs sgd



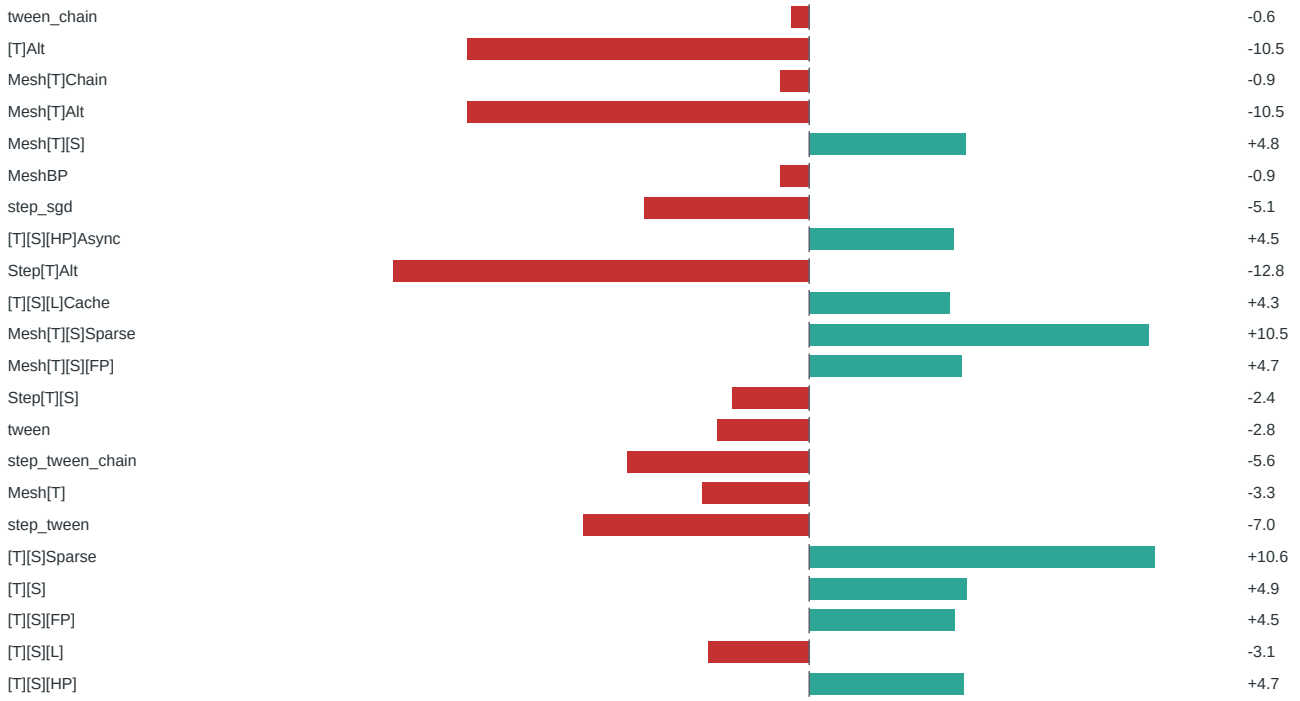
mean ScoreD vs sgd (duty clock)



mean ScoreD vs sgd (duty clock)



mean AvailD vs sgd



AccD vs sgd, every mode x dtype (cols 1-12)

AccD vs sgd, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	-0	-2	+4	-0	+1	-2	-2	+0	-3	+3	-0	-1
Mesh[T]	-1	+2	+4	-1	-6	-3	+1	+0	-2	+2	+3	+3
Mesh[T]Alt	+1	+8	-1	-0	-4	-1	-0	+1	+5	+1	+1	-5
Mesh[T]Chain	+2	-2	+1	-3	+5	-2	+2	-1	-2	+0	+3	-4
Mesh[T][S]	-5	+1	+4	+3	+2	+4	-3	-1	-5	+10	-3	+2
Mesh[T][S][FP]	-2	-6	+3	-2	-1	-5	-0	+1	-3	-3	+3	-0
Mesh[T][S]Sparse	-4	-4	+10	-0	+1	-4	-5	+0	-1	+1	-6	-3
Step[T]Alt	+6	-1	-4	-0	-6	-0	+0	+4	-5	-4	-2	-5
Step[T][S]	+4	-6	+1	-0	-1	-3	-4	-0	-3	+1	-2	-1
[T]Alt	+2	-0	+6	+11	+2	+0	+1	+2	+2	-3	+4	-5
[T][S]	+0	-6	+3	-1	+1	-4	+2	+2	-3	-1	-3	+2
[T][S][FP]	-4	-1	+3	+6	-4	-6	+2	-3	+5	+1	+8	-3
[T][S][HP]	+7	-7	+7	+1	-2	-0	-1	+0	-5	-0	-4	-8
[T][S][HP]Async	-2	-5	+4	+2	+0	+0	+2	+2	-4	+3	+5	-9
[T][S][L]	-3	-5	+3	-1	-7	-2	+3	-0	-1	+5	-2	-3
[T][S][L]Cache	+0	+2	+5	+3	-3	-4	-4	+2	+3	+2	-2	-1
[T][S]Sparse	+0	+1	+1	-3	-0	-7	+2	-1	+2	-2	+3	-4
step_sgd	+1	-0	+3	+1	-1	-2	+1	+0	-0	+4	-1	-1
step_tween	-1	-3	+3	+2	+2	-5	-0	+0	-2	-2	+1	-2
step_tween_chain	+1	-0	+2	+0	-3	-2	-3	+1	-1	+2	+2	+2
tween	+1	-1	+4	+3	-0	-5	-2	+1	-2	+0	-1	+0
tween_chain	-1	+1	+7	+0	-2	+3	+0	+0	-1	-0	+2	-2

AccD vs sgd, every mode x dtype (cols 13-24)

AccD vs sgd, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	-6	+3	+2	+1	+2	-1	+4	-1	-3	+2	+2	+4
Mesh[T]	-3	+5	-3	-0	+0	+4	-6	-4	-5	-2	-3	+1
Mesh[T]Alt	-4	+8	+1	+1	+4	+5	+6	-6	-7	+4	-2	-1
Mesh[T]Chain	-1	-0	+2	+0	-1	+3	+4	-8	-3	+2	+4	-0
Mesh[T][S]	-3	+7	-0	+4	-3	-0	+2	-8	-5	-0	-1	-5
Mesh[T][S][FP]	-2	+9	-1	+1	+2	+5	-7	+3	-2	-6	-1	-2
Mesh[T][S]Sparse	-2	+4	+0	-1	+2	-2	+0	-6	-4	-5	+1	+7
Step[T]Alt	-7	-1	-1	-2	+3	-1	+4	+3	-2	+6	+2	-3
Step[T][S]	+6	+3	-3	+3	+7	-3	+3	-4	-4	-4	+1	-3
[T]Alt	+1	-0	+2	-4	+5	+1	+1	-1	-9	+4	+1	-4
[T][S]	-1	+2	-1	-4	-1	+0	+0	-3	-7	-5	-1	+0
[T][S][FP]	-2	-0	-0	-1	+2	-1	+4	-0	-6	+0	-9	+4
[T][S][HP]	-1	+2	-2	+1	+2	-3	-6	-5	+1	-4	+1	-0
[T][S][HP]Async	-4	+1	-2	+4	+1	-3	+5	-8	-5	-3	-0	+5
[T][S][L]	-2	-4	-5	+2	-2	+3	+1	-6	-0	+0	+0	+1
[T][S][L]Cache	-3	-0	+3	-2	+0	+0	+2	-3	-6	+4	+2	+2
[T][S]Sparse	-3	+6	+4	-5	+4	-0	-2	-4	-6	-5	-1	-6
step_sgd	-2	+1	-2	-0	-3	+3	+1	-0	-5	-0	-3	+5
step_tween	-3	+1	-0	+2	+1	+1	-2	+0	-3	+0	-2	-3
step_tween_chain	-1	+2	+0	-1	-1	+0	+1	-5	-4	-2	-1	+1
tween	-2	+5	-1	-2	+3	-4	+2	-1	-4	-4	+0	+2
tween_chain	-2	+4	+6	+0	+1	+4	+2	-3	-5	+1	-1	+4

AccD vs sgd, every mode x dtype (cols 25-34)

AccD vs sgd, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	-4	+1	-1	-0	-4	-2	+3	+5	+2	+2
Mesh[T]	-4	-4	+4	-2	+2	-3	-1	-3	+2	+8
Mesh[T]Alt	-0	+2	-6	-3	+5	+1	+3	-2	-4	-1
Mesh[T]Chain	+3	-0	-4	-4	+3	+4	-1	+3	+1	+3
Mesh[T][S]	+0	+3	+2	+1	-0	-1	+3	+1	-2	+3
Mesh[T][S][FP]	-1	+4	-6	+7	-1	-0	-3	+2	+4	+3
Mesh[T][S]Sparse	+6	+4	+2	-1	+4	-1	-3	+1	-3	+7
Step[T]Alt	+3	+2	+6	+2	+7	-2	-9	+1	-1	+6
Step[T][S]	-1	-0	+3	-2	+5	-1	-3	+1	-4	+5
[T]Alt	-1	-2	+3	+1	-6	-1	-2	+9	-2	-2
[T][S]	+2	-1	-1	-0	+3	-1	-6	+0	+2	+6
[T][S][FP]	-3	-7	-2	-2	-2	+3	-1	-0	-3	-1
[T][S][HP]	-3	-3	-0	-7	+2	-1	-5	-0	-11	+3
[T][S][HP]Async	+7	-2	+1	+7	+3	+1	-7	+2	+1	-0
[T][S][L]	-3	-1	+1	-4	+1	-1	-7	+1	-2	-7
[T][S][L]Cache	-1	-6	-5	+3	+5	+1	-7	+2	-3	+4
[T][S]Sparse	-0	+0	+4	+0	+2	+3	-9	-2	+4	+0
step_sgd	-4	+3	-0	+0	+4	+3	-1	+0	-1	-0
step_tween	+0	-2	-1	-2	-1	-1	-2	+1	+0	+0
step_tween_chain	-2	+0	+1	-2	-0	+3	-3	+2	-0	-1
tween	-4	-1	-0	-1	+3	-1	-5	+3	-2	+3
tween_chain	+2	-2	+6	+1	+2	-6	-1	+1	+1	+3

ScoreD vs sgd, every mode x dtype (cols 1-12)

ScoreD vs sgd, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	-146	-160	-44	-58	-82	-304	-199	-125	-34	-6	-110	-72
Mesh[T]	-158	-177	-56	-112	-200	-307	-174	-87	-47	-50	-67	-86
Mesh[T]Alt	-487	-630	-209	-236	-353	-996	-531	-448	-85	-342	-371	-214
Mesh[T]Chain	-164	-291	-96	-105	-43	-481	-164	-199	-40	-114	-72	-115
Mesh[T][S]	-382	-460	-136	-168	-239	-716	-443	-345	-67	-203	-279	-130
Mesh[T][S][FP]	-406	-592	-162	-193	-288	-912	-439	-365	-68	-288	-270	-161
Mesh[T][S]Sparse	-390	-532	-119	-168	-235	-866	-455	-321	-62	-235	-298	-153
Step[T]Alt	-409	-580	-197	-225	-327	-778	-464	-390	-81	-317	-331	-202
Step[T][S]	+41	-305	-84	-94	-70	-332	-248	-123	-41	-110	-105	-71
[T]Alt	-364	-497	-147	-166	-265	-721	-407	-361	-70	-274	-270	-175
[T][S]	-124	-275	-21	-83	-68	-562	-100	-113	-36	-81	-69	-53
[T][S][FP]	-300	-385	-53	-88	-213	-762	-271	-278	-28	-156	-130	-112
[T][S][HP]	-68	-387	-11	-85	-82	-314	-163	-190	-44	-114	-168	-113
[T][S][HP]Async	-334	-515	-123	-155	-196	-700	-301	-283	-59	-192	-202	-161
[T][S][L]	-378	-524	-147	-179	-282	-768	-328	-316	-61	-228	-284	-165
[T][S][L]Cache	-294	-391	-104	-107	-224	-677	-380	-244	-46	-164	-215	-123
[T][S]Sparse	-270	-363	-108	-130	-182	-744	-294	-254	-37	-199	-154	-121
step_sgd	-100	-182	-79	-104	-134	-360	-160	-119	-42	-62	-127	-96
step_tween	-257	-359	-118	-139	-148	-533	-240	-210	-60	-185	-187	-132
step_tween_chain	-151	-277	-118	-140	-190	-449	-251	-160	-47	-141	-153	-108
tween	-40	-178	-62	-60	-19	-287	-172	-68	-30	-62	-58	-53
tween_chain	-91	-64	+9	-38	-56	+238	-34	-39	-19	+16	+7	-29

ScoreD vs sgd, every mode x dtype (cols 13-24)

ScoreD vs sgd, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	-151	-33	-29	-68	-210	-40	-15	-90	-323	-65	-208	-61
Mesh[T]	-129	-204	-62	-131	-230	-34	-44	-151	-419	-94	-354	-85
Mesh[T]Alt	-306	-583	-115	-278	-635	-94	-75	-339	-860	-201	-653	-211
Mesh[T]Chain	-129	-282	-53	-115	-340	-44	-26	-182	-395	-89	-225	-87
Mesh[T][S]	-228	-384	-84	-173	-501	-71	-50	-267	-707	-149	-494	-161
Mesh[T][S][FP]	-242	-435	-95	-212	-497	-70	-65	-246	-726	-178	-563	-175
Mesh[T][S]Sparse	-217	-433	-77	-200	-461	-75	-53	-266	-691	-160	-492	-125
Step[T]Alt	-287	-511	-108	-256	-560	-90	-67	-291	-740	-176	-574	-189
Step[T][S]	-54	-113	-64	-19	-6	-52	-14	-157	-236	-115	-90	-109
[T]Alt	-253	-489	-90	-238	-460	-77	-60	-265	-758	-159	-497	-172
[T][S]	-100	-173	-13	-86	-289	-19	-23	-119	-523	-99	-243	-59
[T][S][FP]	-184	-337	-56	-151	-353	-57	-27	-135	-552	-125	-471	-85
[T][S][HP]	-73	-167	-38	-80	-200	-47	-34	-176	-277	-107	-286	-64
[T][S][HP]Async	-207	-373	-77	-144	-442	-73	-37	-244	-656	-146	-446	-104
[T][S][L]	-239	-491	-94	-188	-501	-65	-52	-262	-611	-158	-445	-145
[T][S][L]Cache	-183	-413	-55	-161	-401	-54	-35	-227	-599	-109	-356	-114
[T][S]Sparse	-174	-257	-42	-180	-331	-55	-41	-203	-622	-131	-377	-133
step_sgd	-141	-211	-48	-103	-276	-39	-32	-144	-406	-89	-269	-53
step_tween	-190	-262	-73	-164	-215	-57	-50	-195	-395	-114	-289	-149
step_tween_chain	-144	-223	-54	-143	-293	-61	-40	-217	-404	-121	-342	-111
tween	-98	-21	-29	-96	-60	-48	-19	-114	-210	-101	-168	-55
tween_chain	-66	-6	+17	-5	-73	-8	-7	-86	-242	-48	-126	-14

ScoreD vs sgd, every mode x dtype (cols 25-34)

ScoreD vs sgd, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	-126	-47	-49	-94	-91	-44	-16	-13	-105	-49
Mesh[T]	-167	-106	-58	-122	-85	-52	-39	-143	-169	-12
Mesh[T]Alt	-295	-228	-139	-309	-214	-102	-89	-275	-555	-199
Mesh[T]Chain	-109	-67	-77	-164	-50	-34	-45	-61	-154	-77
Mesh[T][S]	-197	-149	-97	-188	-154	-80	-62	-184	-381	-129
Mesh[T][S][FP]	-231	-164	-120	-200	-166	-85	-76	-200	-400	-147
Mesh[T][S]Sparse	-183	-141	-91	-222	-129	-80	-66	-190	-414	-117
Step[T]Alt	-258	-202	-121	-269	-190	-100	-87	-236	-460	-163
Step[T][S]	-126	-80	-57	-131	-34	-44	-40	-103	-186	-19
[T]Alt	-231	-193	-105	-249	-190	-86	-75	-188	-441	-163
[T][S]	-35	-62	-29	-55	-43	-27	-34	-51	-136	+19
[T][S][FP]	-150	-146	-84	-140	-132	-54	-52	-120	-298	-90
[T][S][HP]	-121	-94	-52	-150	-8	-50	-46	-71	-353	-23
[T][S][HP]Async	-138	-155	-84	-103	-131	-71	-68	-160	-322	-119
[T][S][L]	-225	-171	-93	-240	-144	-81	-72	-193	-403	-161
[T][S][L]Cache	-176	-141	-93	-154	-92	-64	-65	-150	-309	-86
[T][S]Sparse	-152	-108	-57	-162	-94	-51	-61	-151	-274	-87
step_sgd	-153	-57	-58	-118	-41	-45	-41	-96	-147	-88
step_tween	-184	-138	-86	-193	-121	-69	-54	-158	-236	-108
step_tween_chain	-176	-110	-74	-182	-110	-48	-53	-140	-272	-107
tween	-111	-57	-43	-91	-10	-39	-43	-38	-163	-19
tween_chain	-2	-45	+7	-36	+3	-48	-17	-2	-31	-2

AvailD vs sgd, every mode x dtype (cols 1-12)

AvailD vs sgd, every mode x dtype (cols 1-12)

	bfloat16	binary	complex128	complex64	float16	float32	float64	fp4	fp6	fp8e4m3	fp8e5m2	int
MeshBP	-1	+0	-2	-2	+0	+1	-1	-0	-1	+0	-0	-1
Mesh[T]	-1	-3	-5	-4	-3	-1	-3	-2	-3	-2	-3	-4
Mesh[T]Alt	-10	-10	-10	-10	-11	-10	-11	-11	-10	-10	-12	-10
Mesh[T]Chain	+0	-1	-2	-1	+0	-0	-1	-1	-1	-0	+0	-2
Mesh[T][S]	+6	+6	+5	+5	+6	+5	+4	+4	+3	+5	+5	+5
Mesh[T][S][FP]	+5	+5	+5	+6	+6	+3	+5	+4	+4	+5	+6	+5
Mesh[T][S]Sparse	+10	+10	+11	+11	+11	+11	+9	+10	+9	+13	+11	+11
Step[T]Alt	-13	-12	-13	-13	-13	-11	-13	-13	-12	-13	-13	-13
Step[T][S]	+0	-1	-3	-3	-3	+0	-3	-1	-3	-2	-2	-3
[T]Alt	-10	-10	-10	-10	-10	-10	-10	-11	-10	-11	-11	-11
[T][S]	+6	+6	+4	+6	+6	+4	+6	+3	+4	+6	+5	+5
[T][S][FP]	+6	+5	+5	+5	+5	+3	+5	+4	+4	+5	+5	+4
[T][S][HP]	+5	+5	+5	+5	+7	+3	+6	+4	+3	+5	+6	+5
[T][S][HP]Async	+5	+5	+4	+5	+6	+3	+5	+4	+3	+6	+4	+5
[T][S][L]	-3	-3	-3	-3	-3	-2	-1	-3	-2	-3	-3	-4
[T][S][L]Cache	+5	+5	+4	+5	+5	+4	+5	+4	+3	+6	+5	+4
[T][S]Sparse	+10	+11	+11	+12	+11	+10	+9	+10	+9	+11	+11	+11
step_sgd	-4	-4	-6	-6	-5	-4	-5	-3	-5	-4	-4	-6
step_tween	-5	-6	-8	-8	-6	-5	-7	-5	-8	-6	-7	-7
step_tween_chain	-4	-5	-7	-6	-5	-4	-5	-4	-6	-5	-5	-7
tween	-0	-2	-5	-3	-1	-0	-4	-2	-3	-2	-2	-4
tween_chain	-1	+0	-1	-1	+0	+1	-1	-0	-1	+1	-0	-1

AvailD vs sgd, every mode x dtype (cols 13-24)

AvailD vs sgd, every mode x dtype (cols 13-24)

	int16	int2	int3	int32	int4	int5	int6	int64	int8	nf4	ternary	uint
MeshBP	-1	-1	-2	-1	-2	-2	-1	-1	+1	-2	-0	-1
Mesh[T]	-4	-3	-4	-3	-2	-3	-4	-3	-2	-4	-3	-5
Mesh[T]Alt	-11	-10	-9	-10	-11	-10	-10	-10	-10	-11	-11	-11
Mesh[T]Chain	-1	-0	-2	-1	-2	-2	-2	+0	+1	-2	-1	-1
Mesh[T][S]	+6	+5	+4	+6	+4	+3	+4	+6	+5	+3	+6	+5
Mesh[T][S][FP]	+6	+5	+4	+5	+6	+3	+4	+6	+5	+2	+5	+5
Mesh[T][S]Sparse	+12	+10	+10	+12	+10	+7	+9	+11	+11	+10	+10	+11
Step[T]Alt	-13	-12	-12	-13	-13	-13	-12	-14	-12	-14	-13	-13
Step[T][S]	-3	-1	-3	-2	-1	-4	-3	-3	+1	-5	-1	-3
[T]Alt	-12	-11	-9	-11	-12	-10	-9	-11	-10	-11	-11	-10
[T][S]	+5	+5	+4	+5	+5	+4	+3	+6	+4	+3	+5	+5
[T][S][FP]	+5	+4	+4	+5	+4	+3	+3	+6	+5	+2	+4	+5
[T][S][HP]	+6	+5	+4	+6	+5	+3	+4	+5	+5	+2	+4	+5
[T][S][HP]Async	+5	+5	+4	+6	+4	+2	+4	+5	+4	+2	+4	+5
[T][S][L]	-4	-4	-3	-3	-4	-3	-3	-3	-3	-5	-3	-4
[T][S][L]Cache	+5	+5	+4	+5	+4	+2	+3	+5	+5	+3	+4	+4
[T][S]Sparse	+12	+11	+10	+11	+10	+8	+9	+11	+11	+10	+10	+12
step_sgd	-5	-5	-4	-5	-5	-7	-6	-5	-4	-6	-5	-6
step_tween	-8	-6	-7	-8	-5	-8	-8	-8	-6	-7	-5	-8
step_tween_chain	-5	-4	-5	-5	-5	-7	-6	-7	-4	-7	-6	-7
tween	-3	-2	-2	-3	-1	-4	-3	-3	-0	-5	-3	-4
tween_chain	-1	+0	-1	-0	+0	-1	-1	-0	+1	-2	-0	-1

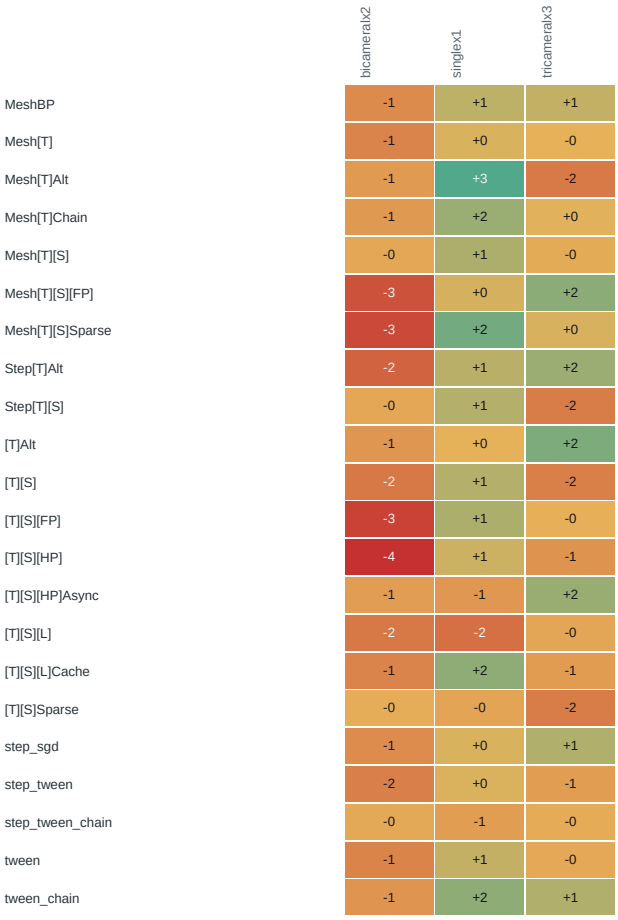
AvailD vs sgd, every mode x dtype (cols 25-34)

AvailD vs sgd, every mode x dtype (cols 25-34)

	uint16	uint2	uint3	uint32	uint4	uint5	uint6	uint64	uint8	uintptr
MeshBP	-1	-2	-1	-2	-0	-3	-0	-1	-0	-2
Mesh[T]	-4	-4	-4	-4	-4	-5	-3	-3	-2	-3
Mesh[T]Alt	-10	-11	-10	-12	-11	-11	-10	-11	-10	-11
Mesh[T]Chain	-1	-1	-2	-1	-1	-1	-1	-1	+1	-1
Mesh[T][S]	+6	+6	+4	+5	+6	+2	+3	+6	+6	+5
Mesh[T][S][FP]	+6	+5	+3	+6	+6	+1	+3	+6	+6	+5
Mesh[T][S]Sparse	+12	+12	+10	+11	+12	+7	+9	+12	+11	+12
Step[T]Alt	-13	-13	-13	-14	-13	-14	-12	-12	-12	-12
Step[T][S]	-3	-3	-4	-3	-3	-4	-3	-3	-1	-3
[T]Alt	-11	-11	-10	-12	-11	-11	-9	-10	-10	-10
[T][S]	+6	+5	+4	+6	+5	+2	+4	+7	+6	+5
[T][S][FP]	+6	+4	+3	+6	+5	+2	+3	+6	+6	+5
[T][S][HP]	+7	+5	+3	+6	+6	+2	+4	+6	+6	+5
[T][S][HP]Async	+6	+5	+4	+5	+5	+1	+3	+6	+6	+5
[T][S][L]	-3	-5	-3	-4	-3	-4	-3	-3	-2	-3
[T][S][L]Cache	+5	+4	+3	+5	+5	+1	+3	+5	+6	+5
[T][S]Sparse	+12	+11	+10	+11	+12	+7	+9	+13	+10	+12
step_sgd	-5	-5	-5	-5	-5	-7	-5	-5	-4	-6
step_tween	-8	-8	-7	-8	-7	-9	-6	-7	-6	-7
step_tween_chain	-6	-6	-7	-6	-6	-6	-5	-6	-5	-6
tween	-3	-4	-4	-4	-2	-4	-3	-3	-3	-3
tween_chain	+0	-1	-1	-1	-0	-3	-1	-1	+0	-1

AccD vs sgd, every mode x arch

AccD vs sgd, every mode x arch



Family collapse - Step* vs non-Step

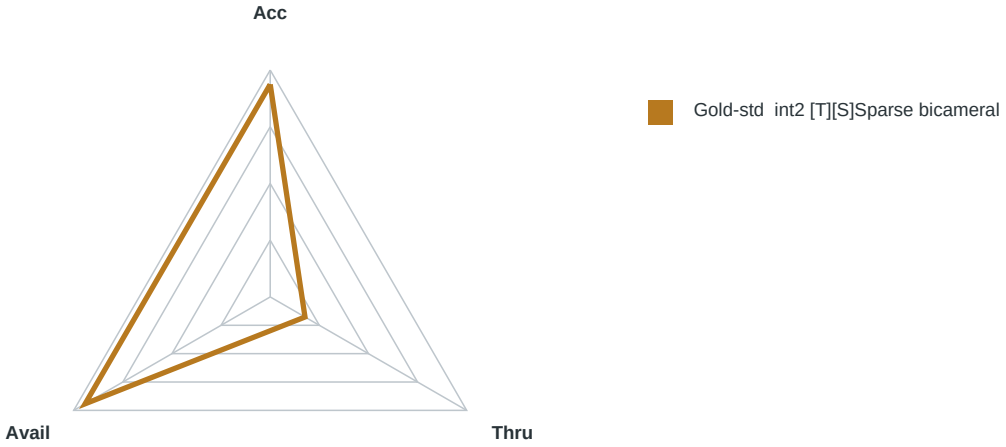
Step* is a 1D pipe (one sample enters layer 0 per tick; output is the sample that entered depth ticks ago). Non-Step of the same family is a full-chain update. AccD is a real scheduler split, not leftover warm-up forwards.

step	plain	n	mean |AccD|
Step[T]Alt	[T]Alt	102	6.82
Step[T][S]	[T][S]	102	4.79
step_sgd	sgd	102	3.09
step_tween	tween	102	3.57
step_tween_chain	tween_chain	102	3.77

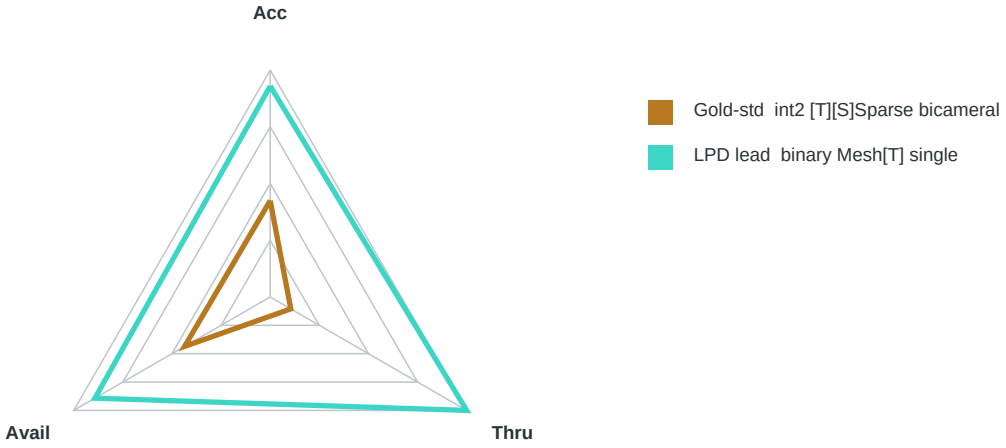
Consciousness - Acc, Throughput, Availability

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 uint6|none|Mesh[T]Alt|tricameral|simd Acc 43.8 Thru 130 Avail 16.9% 0.5 KiB (RAM reference)
Lucy Score champ (T x Avail x Acc) float32|none|tween_chain|single|simd Score 2720.9 Acc 36.9 Soft 25 1.6 KiB
Live-fit champ (best Q) float32|none|tween_chain|single|simd Acc 36.9 Thru 18322 Avail 40.2% 1.6 KiB
Gold-std (2+ pillars, Acc keep >= 80%, then smallest then fastest): int2|none|[T][S]Sparse|bicameral|simd mode [T][S]Sparse Acc 41.0 Thru 3244 0.1 KiB
Board fastest float32|none|sgd|single|simd Thru 18742 (traps may own this) Best availability float32|none|[T][S]Sparse|tricameral|simd 49.6%
Learner Thru peak 18322 learner Avail peak 49.0%

Consciousness radar - Acc / Thru / Avail vs learner peaks



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
[T][S]Sparse	6	43.4	0.1	3244	int2 [T][S]Sparse bicameral
[T][S][L]Cache	2	36.0	0.4	2838	fp8e4m3 [T][S][L]Cache single
Mesh[T][S]Sparse	1	35.3	1.3	809	uint16 Mesh[T][S]Sparse tricameral
tween_chain	1	36.9	1.6	18322	float32 tween_chain single
[T][S][HP]	1	37.8	1.6	11272	float32 [T][S][HP] single
[T][S][HP]Async	2	40.9	1.6	2755	uint32 [T][S][HP]Async single
Mesh[T][S]	2	39.7	1.6	2304	uint32 Mesh[T][S] single / float32 Mesh[T][S] tricameral
[T][S][FP]	2	41.7	3.2	2850	int64 [T][S][FP] single

Near-gold - 2+ pillars, RAM <= 50% of Acc champ

Band	Cell	Acc%	Thru%	Avail%	Q%	RAM%	xSmall	LPD	Acc	Thru	KiB
near	int2 [T][S]Sparse bicameral	94	18	94	54	28	3.5	1.90	41.0	3244	0.1
near	int3 [T][S]Sparse bicameral	81	4	82	30	43	2.4	0.72	35.3	778	0.2
near	uint3 [T][S]Sparse bicameral	99	4	82	33	48	2.1	0.68	43.4	783	0.2

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
-	binary Mesh[T] single	70	58	66	64	10	10.3	6.64	30.7	10580	0.1
-	binary [T][S]Sparse single	72	23	74	49	10	10.3	5.10	31.6	4138	0.1
-	binary Mesh[T]Alt single	75	13	54	38	10	10.3	3.90	33.0	2437	0.1
-	int2 MeshBP single	75	63	71	70	19	5.2	3.59	32.8	11632	0.1
-	ternary Step[T][S] single	77	63	67	69	19	5.2	3.54	33.7	11526	0.1
-	binary [T][S][L]Cache bicameral	78	14	78	44	14	7.1	3.12	34.3	2618	0.1
-	ternary [T][S][L] single	70	31	68	53	19	5.2	2.72	30.7	5642	0.1
-	int2 Mesh[T][S] single	71	21	77	49	19	5.2	2.51	31.0	3892	0.1
-	int2 Mesh[T][S][FP] single	76	17	75	46	19	5.2	2.38	33.3	3163	0.1
-	binary [T]Alt tricameral	72	11	44	33	16	6.4	2.10	31.5	2087	0.1
-	uint2 Mesh[T]Chain single	73	20	69	47	22	4.5	2.09	31.8	3737	0.1
acc	binary Mesh[T]Alt bicameral	81	6	44	27	14	7.1	1.91	35.3	1020	0.1
-	int2 Mesh[T]Alt single	76	13	51	37	19	5.2	1.90	33.1	2381	0.1
near	int2 [T][S]Sparse bicameral	94	18	94	54	28	3.5	1.90	41.0	3244	0.1
-	int2 tween bicameral	77	32	63	54	28	3.5	1.90	33.6	5901	0.1
-	ternary MeshBP bicameral	72	27	68	51	28	3.5	1.80	31.4	4978	0.1
-	ternary Mesh[T]Chain bicameral	80	24	64	49	28	3.5	1.74	34.8	4308	0.1
-	int2 Mesh[T] bicameral	73	26	61	49	28	3.5	1.72	31.9	4734	0.1
acc	int2 Mesh[T][S] bicameral	95	11	76	44	28	3.5	1.54	41.7	2106	0.1
-	ternary Mesh[T][S]Sparse bicameral	80	10	96	43	28	3.5	1.52	34.9	1918	0.1

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

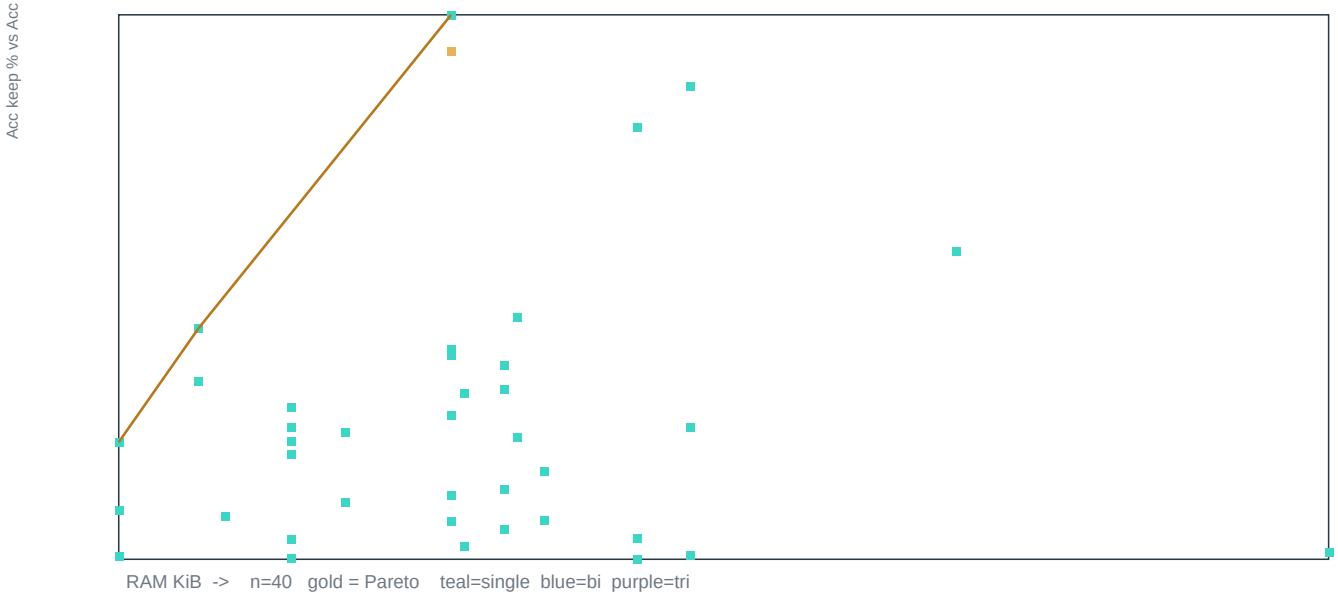
Band	Cell	Acc%	Thru%	Avail%	Q%	LPD	Thru	Avail
keep	float32 tween_chain single	84	100	82	88	0.28	18322	40.2
keep	float32 [T][S][HP] single	86	62	85	77	0.25	11272	41.5
-	float32 Mesh[T] single	76	80	74	77	0.25	14631	36.3
-	int2 MeshBP single	75	63	71	70	3.59	11632	34.9
-	ternary Step[T][S] single	77	63	67	69	3.54	11526	32.7
acc	bfloat16 Step[T][S] single	92	46	74	68	0.44	8347	36.3
-	int8 [T][S][HP] single	70	51	84	67	0.86	9297	41.1
-	binary Mesh[T] single	70	58	66	64	6.64	10580	32.4
-	float64 [T][S] single	73	36	85	61	0.10	6657	41.6
-	float32 Step[T]Alt single	75	48	62	60	0.19	8777	30.3

Trap - tiny RAM, Acc keep < 70% (Score/MiB and SoftAcc Score lie here)

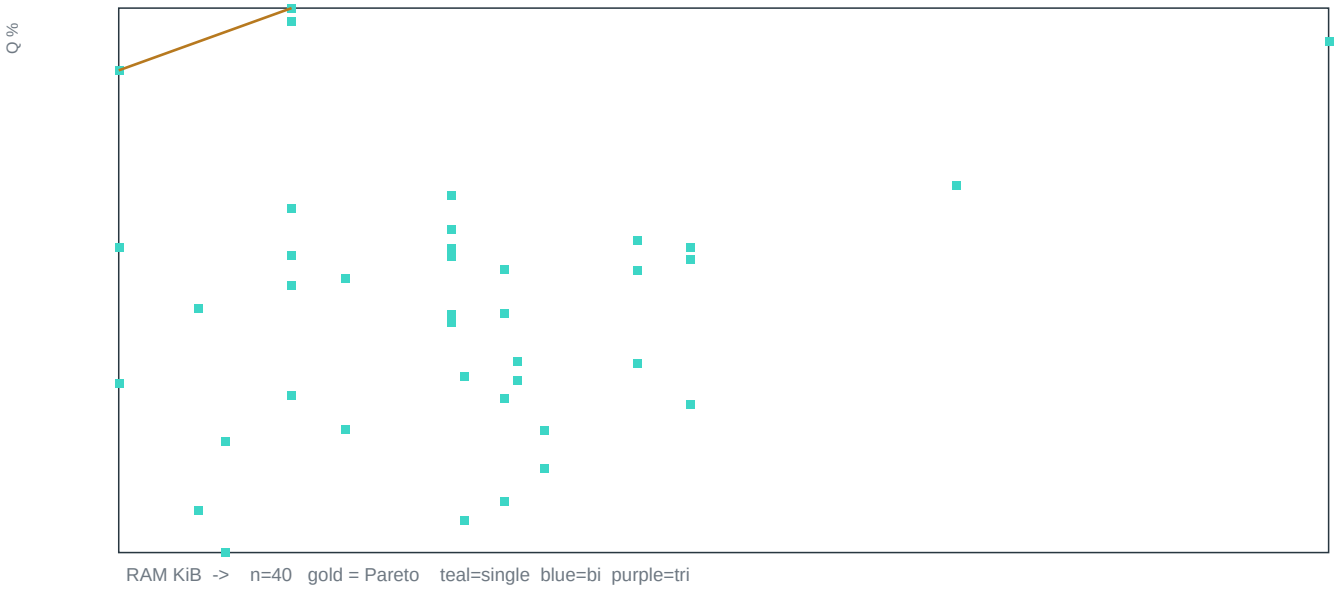
Band	Cell	Acc%	Thru%	Avail%	Q%	RAM%	xSmall	LPD	Acc	Thru	KiB
trap	binary sgd single	56	77	70	67	10	10.3	0.00	24.6	14113	0.1
trap	binary step_sgd single	62	65	63	63	10	10.3	0.00	27.1	11942	0.1
trap	binary tween single	52	66	65	61	10	10.3	0.00	22.9	12126	0.1
trap	binary tween_chain single	63	63	70	65	10	10.3	0.00	27.8	11582	0.1
trap	binary step_tween single	60	50	61	57	10	10.3	0.00	26.1	9219	0.1
trap	binary step_tween_chain single	67	52	64	60	10	10.3	0.00	29.1	9488	0.1
trap	binary MeshBP single	61	63	74	66	10	10.3	0.00	26.6	11588	0.1
trap	binary Mesh[T]Chain single	66	47	71	60	10	10.3	0.00	28.8	8558	0.1
trap	binary [T][S] single	46	42	79	54	10	10.3	0.00	20.2	7693	0.1
trap	binary Step[T][S] single	40	63	66	55	10	10.3	0.00	17.4	11456	0.1

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

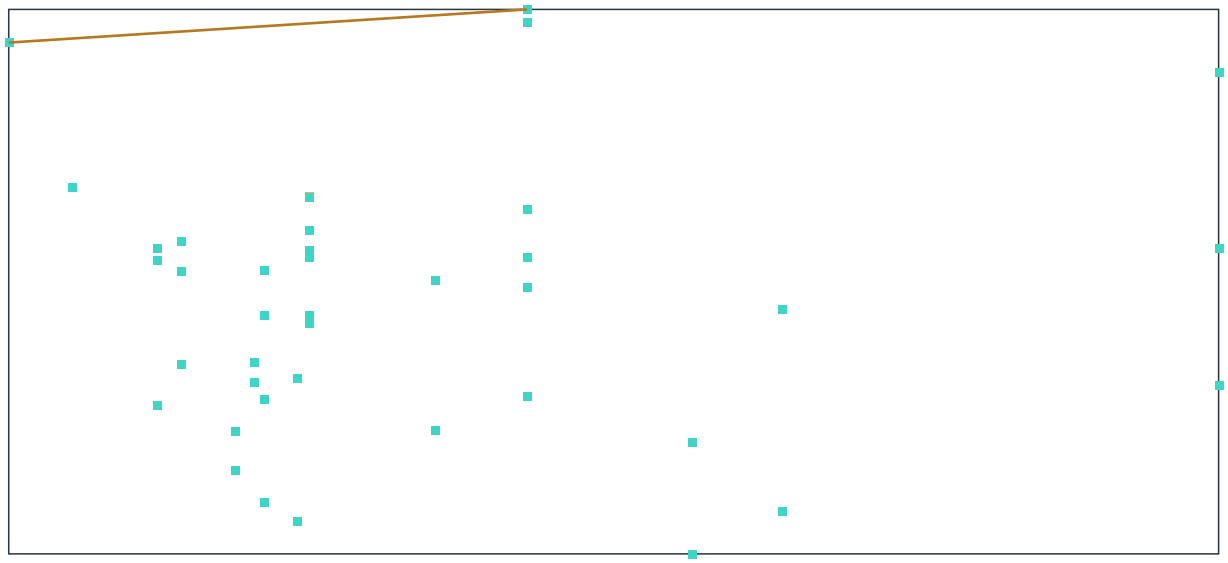
Acc keep % vs RAM KiB (gold = high Acc, low RAM vs Acc champ)



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

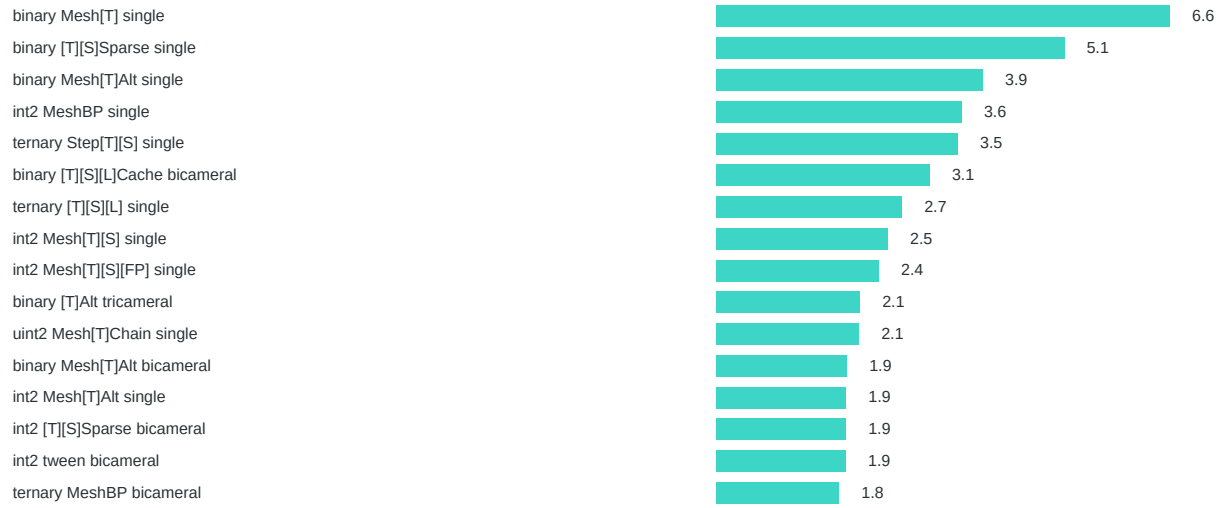


Q% vs shrink vs Acc champ (gold = upper right)

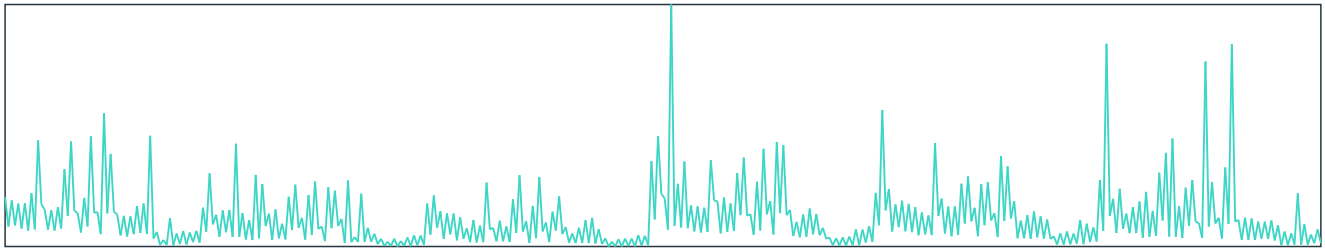



times smaller than Acc champ -> n=40 gold = Pareto teal=single blue=bi purple=tri
Q %

Top Lucy density (LPD)

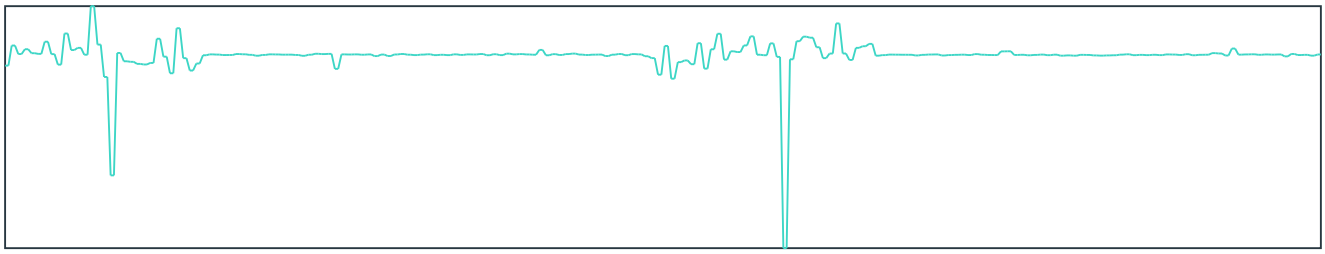


Live pulse (Score)



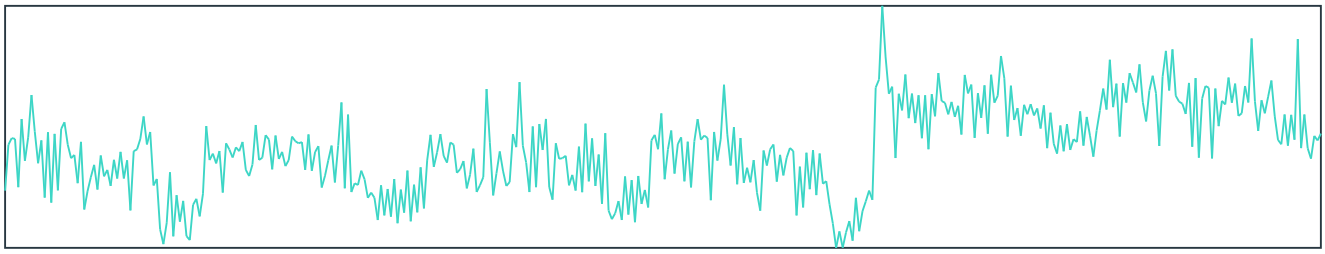
n=400 min=21.07 max=1954.36

Live pulse (SoftAcc)



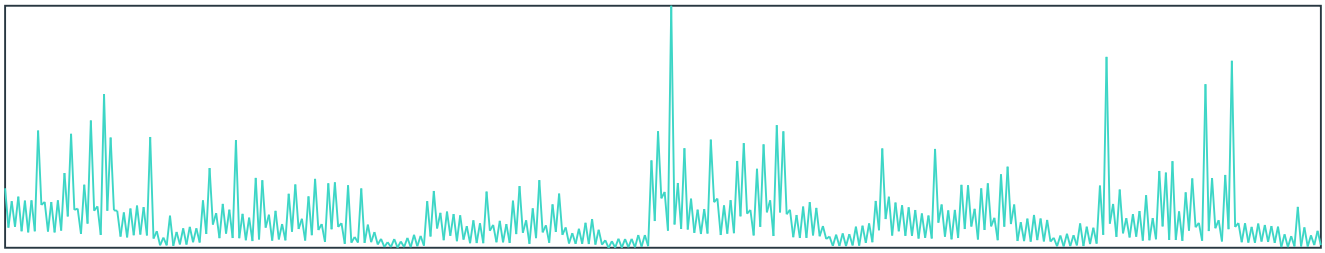
n=400 min=24.99 max=25.00

Live pulse (Availability)



n=400 min=26.99 max=55.35

Live pulse (Throughput)



n=400 min=270.31 max=19188.61

Queue by train mode (this epoch)

Mode	Done	Run	Left	Total