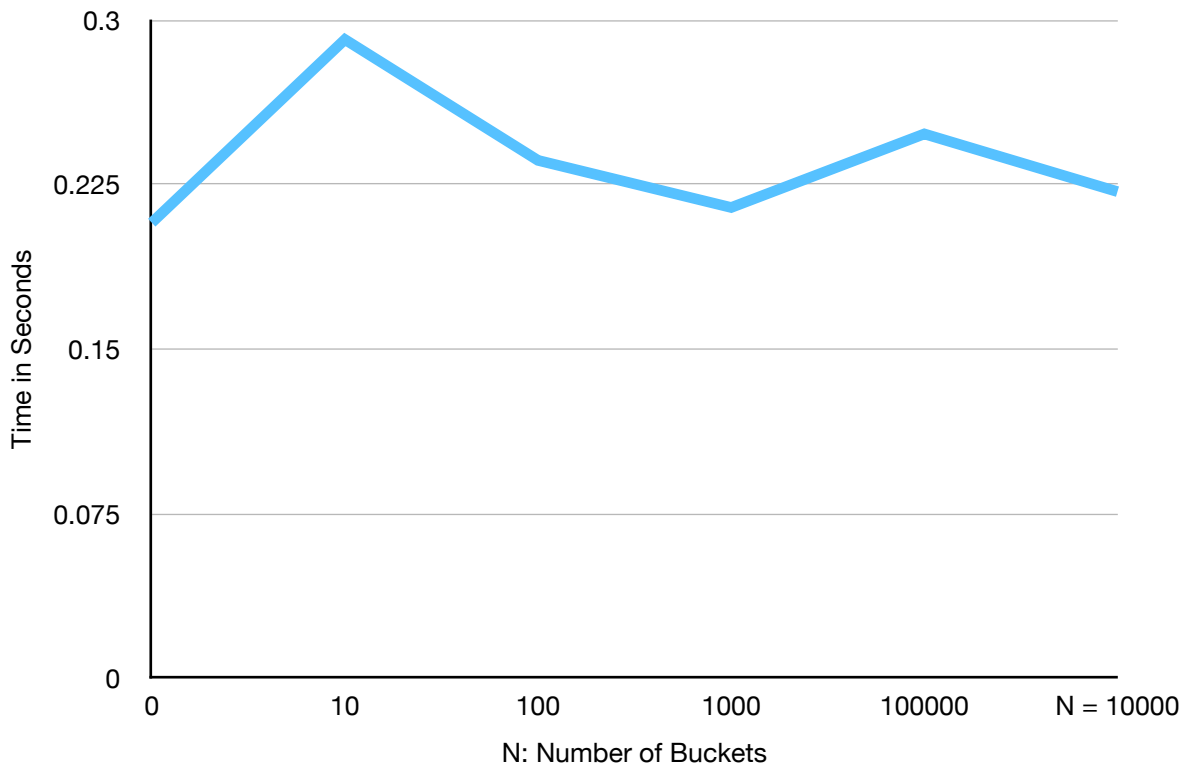


Variant 1: Histogram buckets as atomics

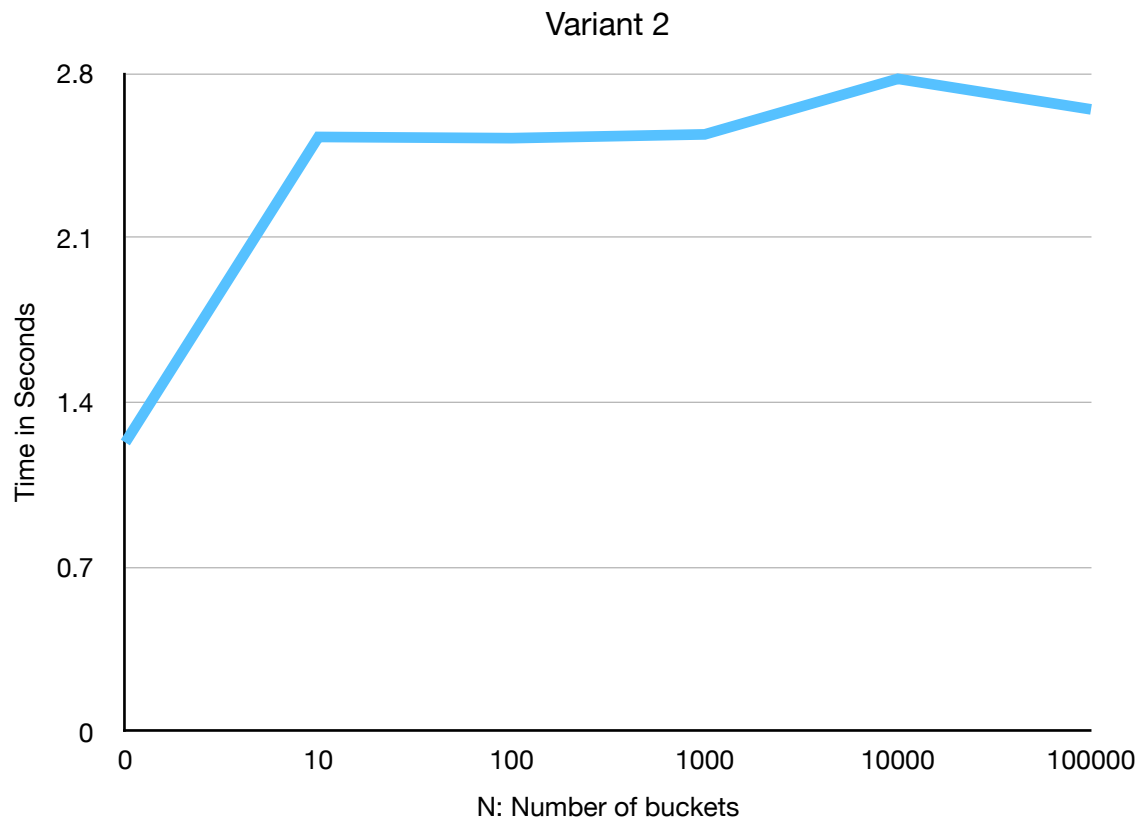
N	0	10	100	1000	N = 10000	100000
Time (seconds)	0.200014	0.293494	0.226823	0.222899	0.235436	0.212265
Time (seconds)	0.183444	0.297793	0.247106	0.199879	0.258028	0.219062
Time (seconds)	0.172147	0.300852	0.237362	0.222421	0.235034	0.212637
Time (seconds)	0.196335	0.302297	0.2462	0.208984	0.262492	0.217563
Time (seconds)	0.252161	0.29741	0.225396	0.225233	0.255609	0.249019
Time (seconds)	0.199042	0.313329	0.244885	0.209968	0.236392	0.24127
Time (seconds)	0.255673	0.294001	0.250407	0.197976	0.254624	0.213344
Time (seconds)	0.198077	0.273391	0.22542	0.222104	0.256929	0.213589
Time (seconds)	0.209285	0.293999	0.231693	0.219832	0.232066	0.220684
Time (seconds)	0.209376	0.243443	0.224012	0.215424	0.253278	0.217555
Average Time (seconds)	0.2075554	0.2910009	0.2359304	0.214472	0.2479888	0.2216988

Variant 1



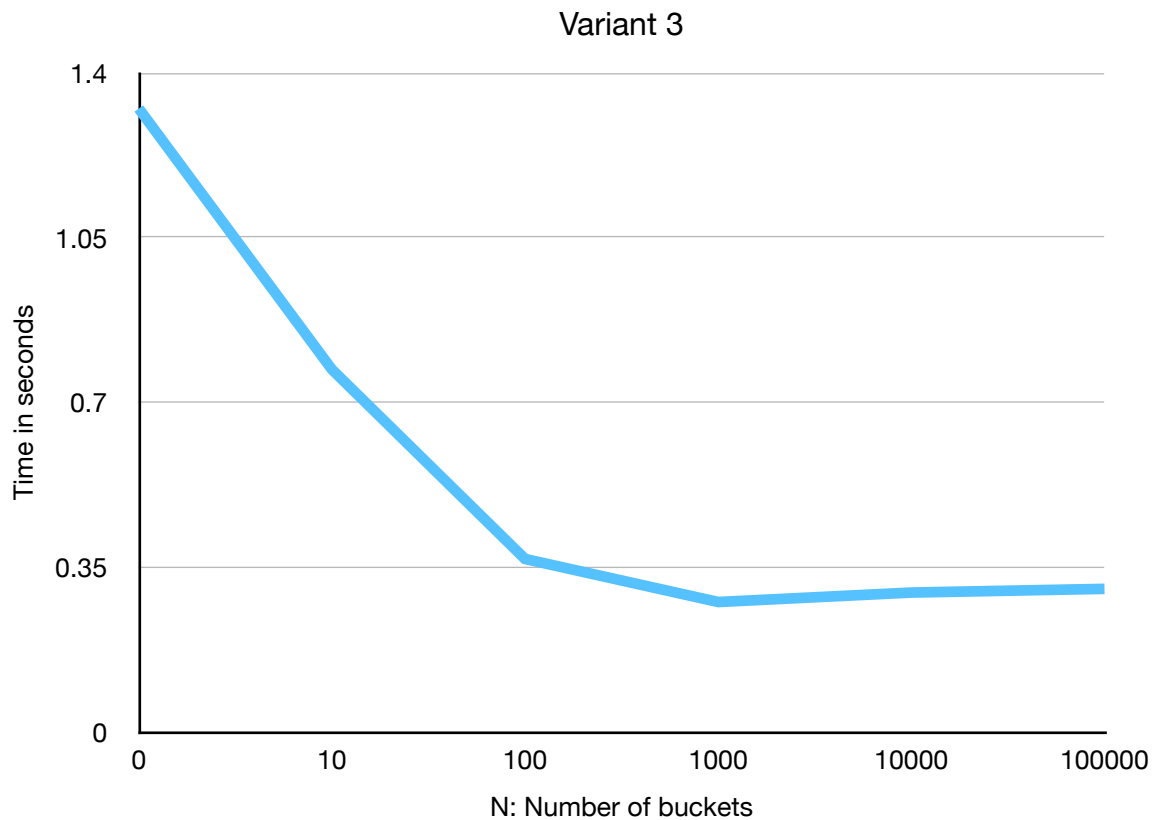
Variant 2: Single mutex for the histogram

N	0	10	100	1000	10000	100000
Time (seconds)	1.22566	2.55867	2.54895	2.57573	2.7872	2.61585
Time (seconds)	1.23062	2.51487	2.52171	2.53124	2.76329	2.68846
Time (seconds)	1.2519	2.52365	2.51877	2.53304	2.76868	2.62954
Time (seconds)	1.21993	2.5164	2.49351	2.54766	2.80156	2.62052
Time (seconds)	1.21702	2.52686	2.53184	2.50747	2.75548	2.67245
Average Time (seconds)	1.229026	2.52809	2.522956	2.539028	2.775242	2.645364



Variant 3: Mutex for each bucket

N	0	10	100	1000	10000	100000
Time (seconds)	1.31965	0.762549	0.359771	0.287062	0.304056	0.289095
Time (seconds)	1.29919	0.774074	0.37555	0.262197	0.2919	0.30255
Time (seconds)	1.31133	0.704112	0.366309	0.265469	0.281137	0.298534
Time (seconds)	1.39936	0.854561	0.372157	0.285685	0.306005	0.321372
Time (seconds)	1.29541	0.756491	0.363445	0.279341	0.297037	0.30787
Average Time (seconds)	1.324988	0.770357	0.367446	0.275950	0.296027	0.303884



Variant 4: Mutex per M=4 buckets

N	0	10	100	1000	10000	100000
T1	1.60444	1.44562	0.506867	0.293745	0.319221	0.271692

Variant 4: Mutex per M=13 buckets

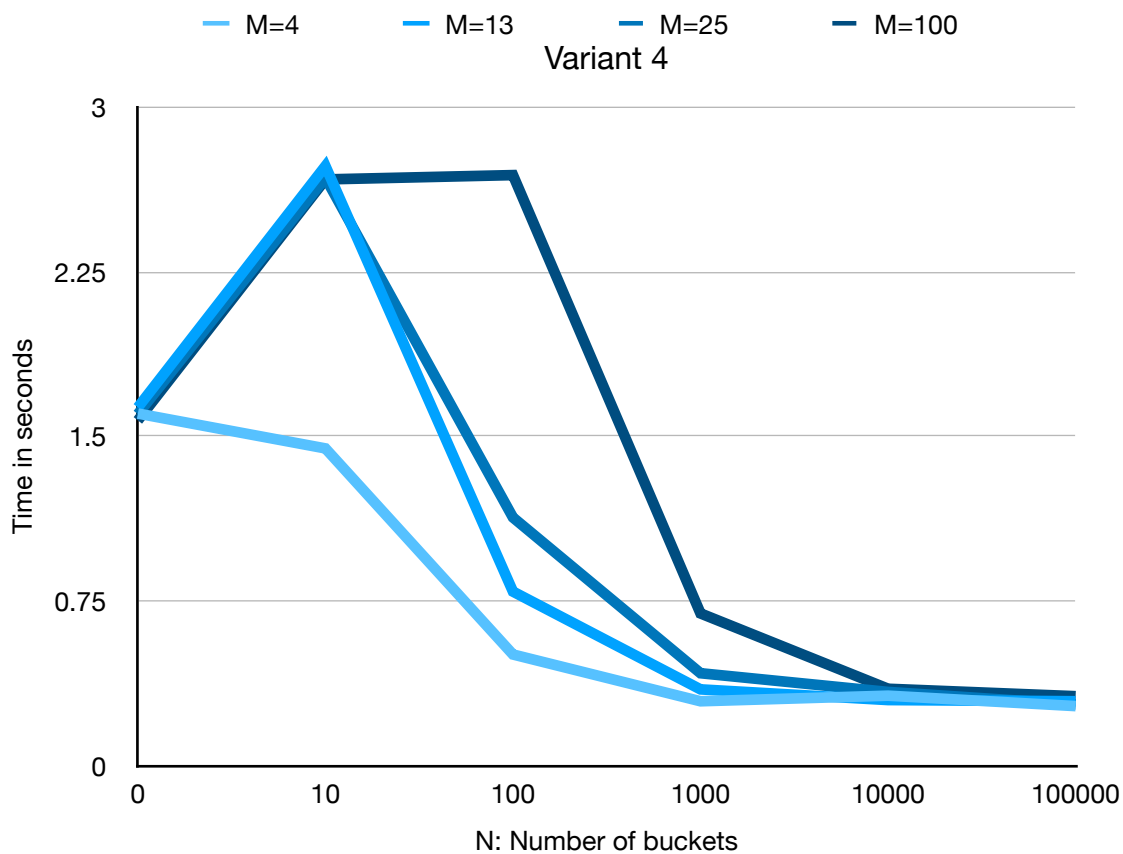
N	0	10	100	1000	10000	100000
T2	1.6324	2.73201	0.793413	0.347916	0.299244	0.29388

Variant 4: Mutex per M=25 buckets

N	0	10	100	1000	10000	100000
T3	1.60192	2.67858	1.13101	0.421486	0.336323	0.279408

Variant 4: Mutex per M=100 buckets

N	0	10	100	1000	10000	100000
T4	1.57324	2.67107	2.69065	0.693897	0.350736	0.316828



Comparison Graphs

