

CS224

LAB 6

SECTION 3

MUSTAFA MERT GÜLHAN

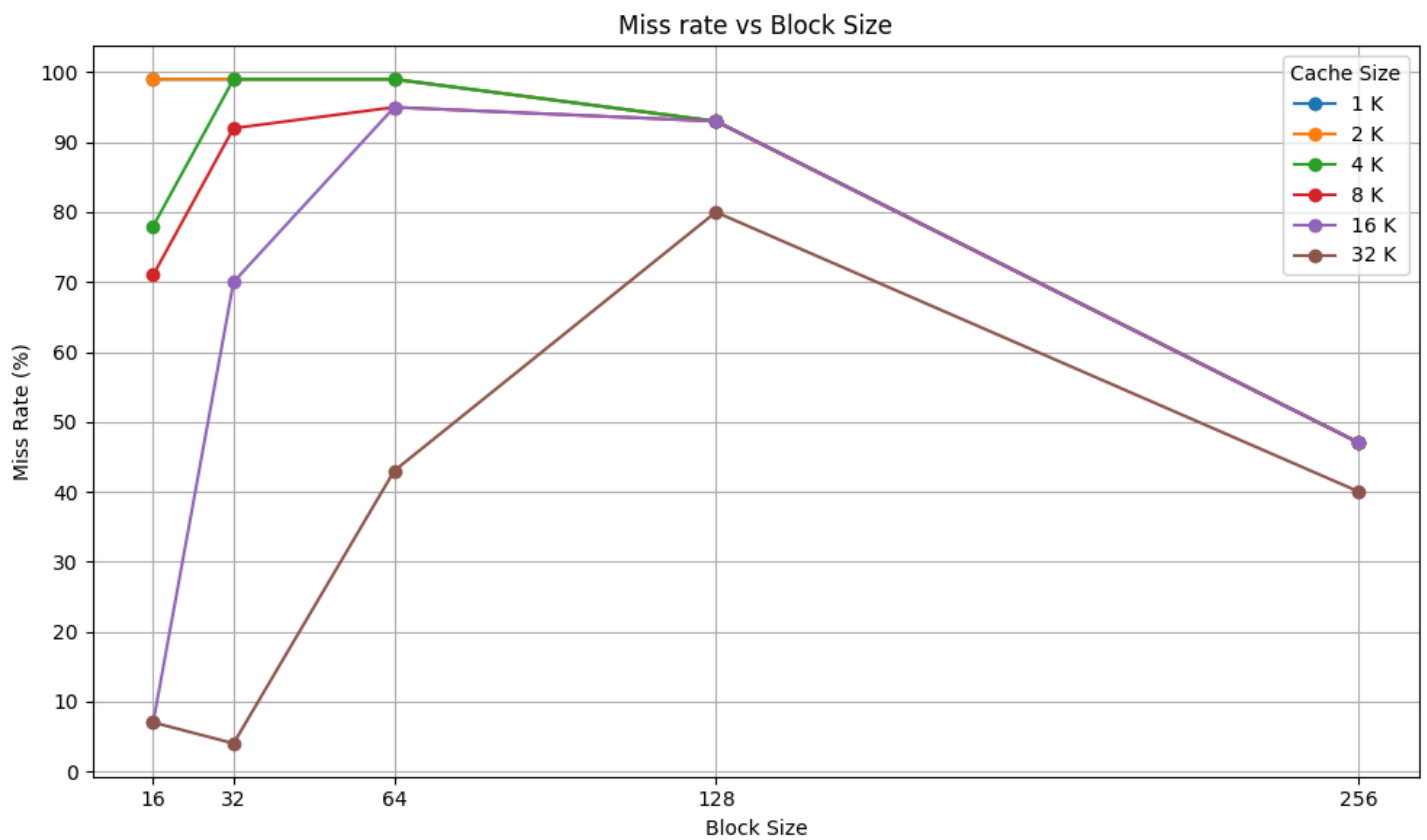
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11/12/2024

PART A)

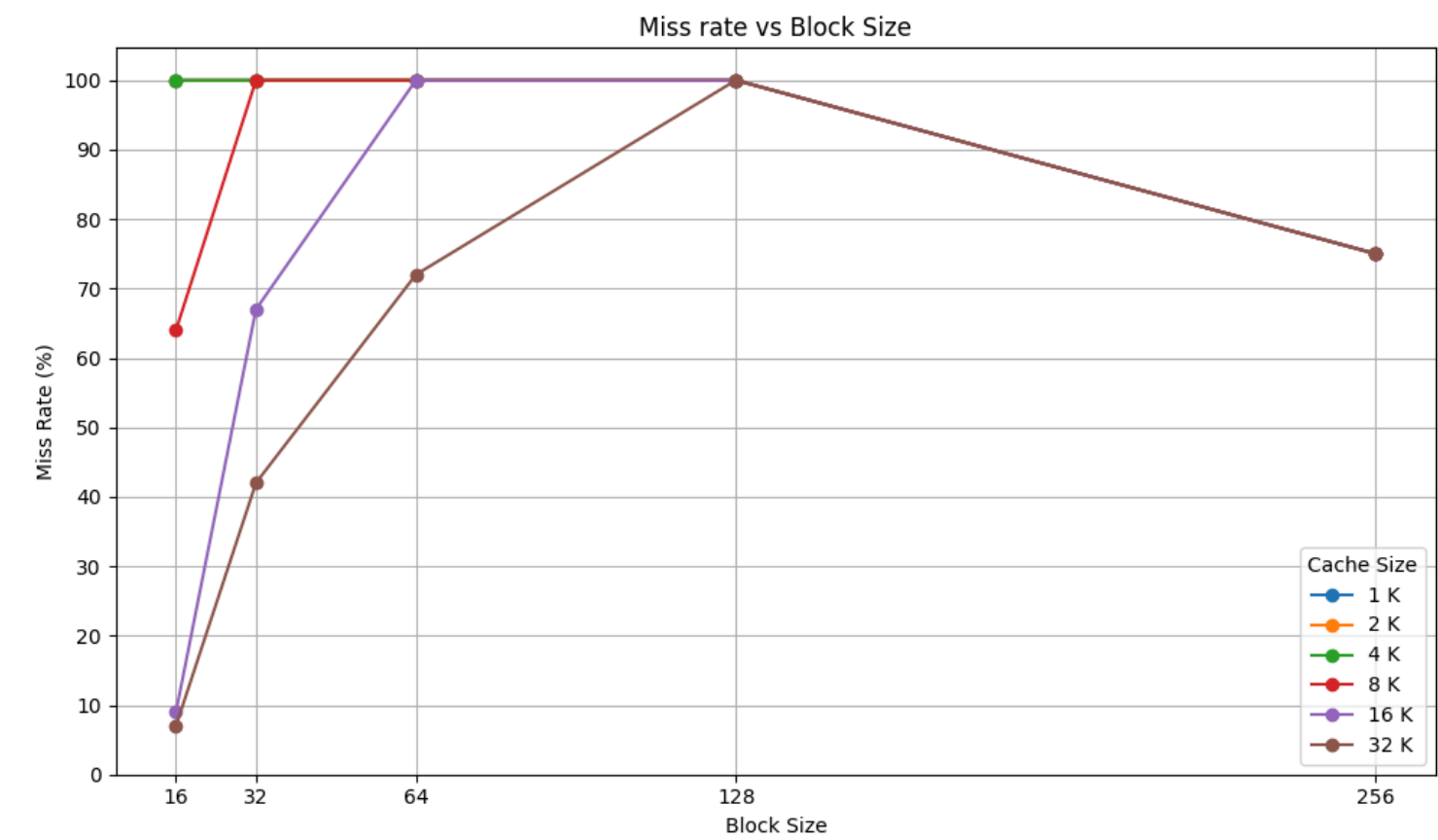
For Size 120 Row Sum:

Block Size	Cache Size(Bytes)					
	1024	2048	4096	8192	16384	32768
16	%99/14407	%99/14407	%78/12853	%71/11775	%7/967	%7/959
32	%99/14405	%99/14405	%99/14405	%92/13389	%70/10161	%4/533
64	%99/14404	%99/14404	%99/14404	%95/13896	%95/12372	%43/6291
128	%93/13507	%93/13507	%93/13507	%93/13507	%93/13507	%80/11666
256	%47/6788	%47/6787	%47/6787	%47/6787	%47/6787	%40/5898



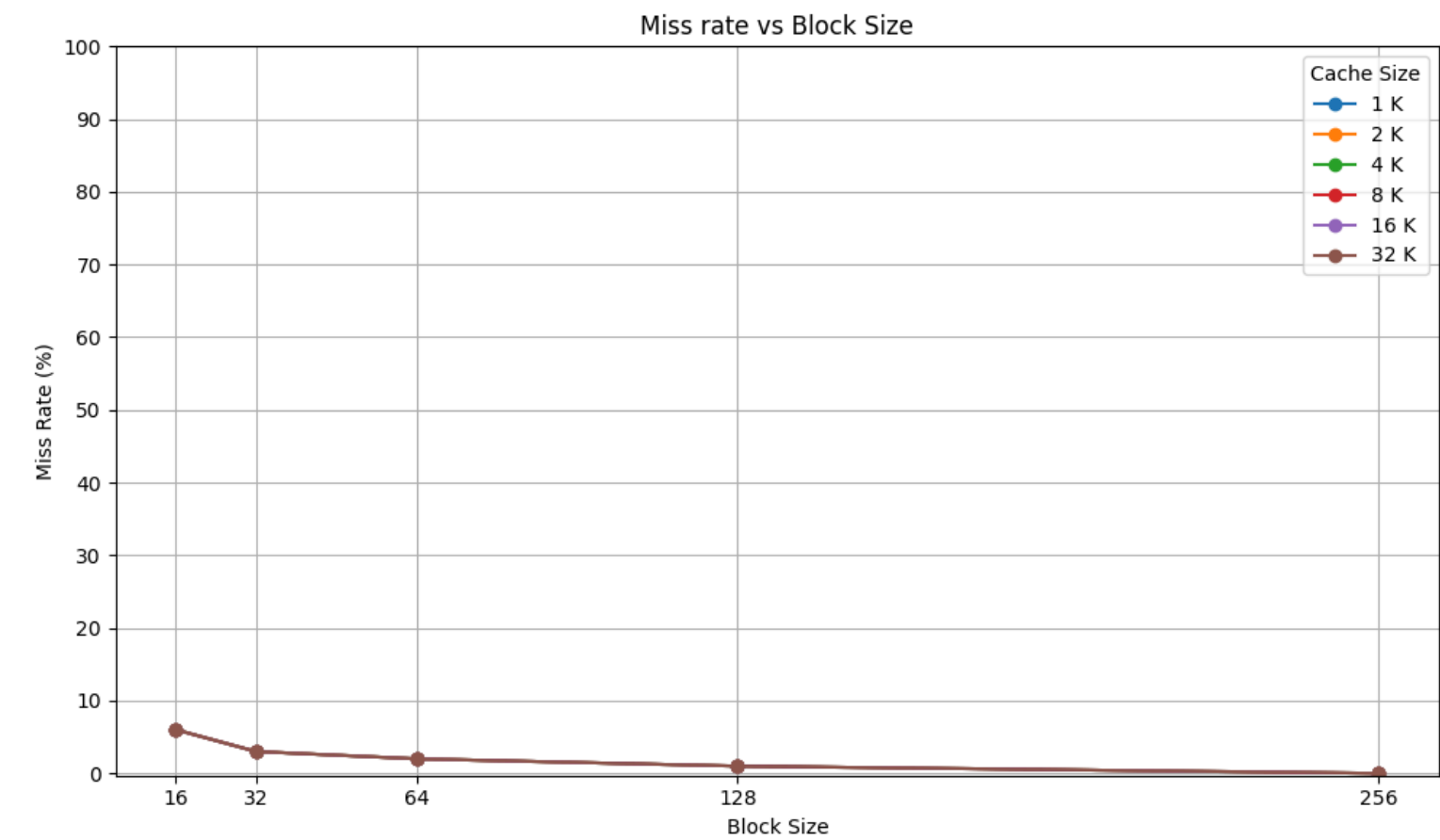
For Size 193 Row Sum:

Block Size	Cache Size(Bytes)					
	1024	2048	4096	8192	16384	32768
16	%100/37256	%100/37256	%100/37256	%64/23924	%9/3188	%7/2516
32	%100/37254	%100/37254	%100/37254	%100/37254	%67/25056	%42/5612
64	%100/37253	%100/37253	%100/37253	%100/37253	%100/37253	%72/27053
128	%100/37252	%100/37252	%100/37252	%100/37252	%100/37252	%100/37252
256	%75/28118	%75/28117	%75/28117	%75/28117	%75/28117	%75/28117



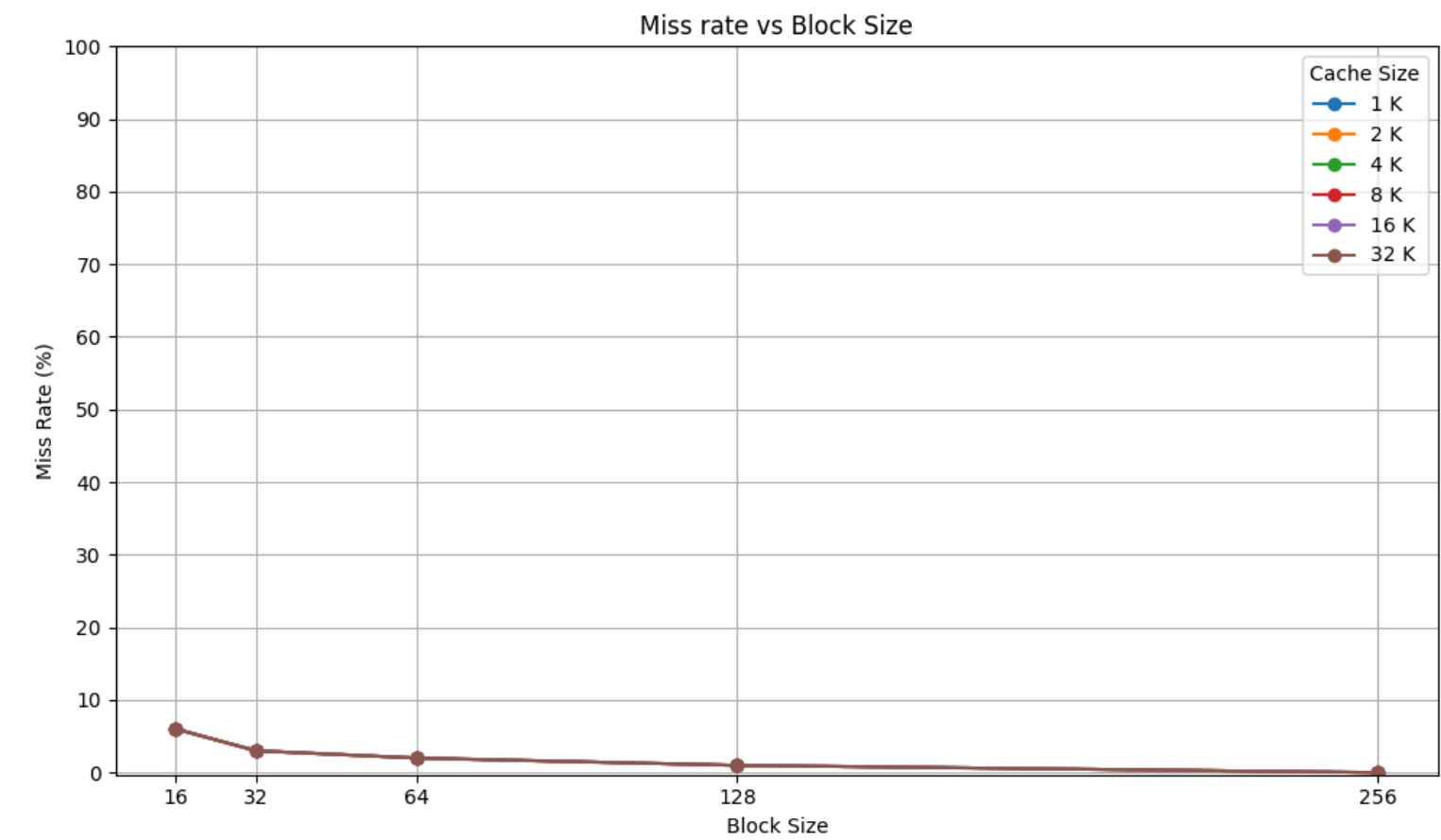
For Size 120 Col Sum:

Block Size	Cache Size(Bytes)					
	1024	2048	4096	8192	16384	32768
16	%6/907	%6/907	%6/907	%6/907	%6/907	%6/907
32	%3/455	%3/455	%3/455	%3/455	%3/455	%3/455
64	%2/229	%2/229	%2/229	%2/229	%2/229	%2/229
128	%1/116	%1/116	%1/116	%1/116	%1/116	%1/116
256	%0/61	%0/60	%0/60	%0/60	%0/60	%0/60



For Size 193 Col Sum:

Block Size	Cache Size(Bytes)					
	1024	2048	4096	8192	16384	32768
16	%6/2336	%6/2336	%6/2336	%6/2336	%6/2336	%6/2336
32	%3/1170	%3/1170	%3/1170	%3/1170	%3/1170	%3/1170
64	%2/587	%2/587	%2/587	%2/587	%2/587	%2/587
128	%1/295	%1/295	%1/295	%1/295	%1/295	%1/295
256	%0/150	%0/149	%0/149	%0/149	%0/149	%0/149



PART B)

128-8192 (Bad)

256-16384 (Average)

32-32768 (Good)

For Size 120:

Type	Block Size/Cache Size	Result
Direct	128-8192	%93/13507
Direct	256-16384	%47/6787
Direct	32-32768	%4/533
Fully LRU	128-8192	%93/13507
Fully LRU	256-16384	%47/6787
Fully LRU	32-32768	%4/545
Fully Rand	128-8192	%93/13498
Fully Rand	256-16384	%45/6593
Fully Rand	32-32768	%5/708

For Size 193:

Type	Block Size/Cache Size	Result
Direct	128-8192	%100/37252
Direct	256-16384	%75/28117
Direct	32-32768	%42/5612
Fully LRU	128-8192	%100/37252

Fully LRU	256-16384	%75/28117
Fully LRU	32-32768	%4/1356
Fully Rand	128-8192	%100/37251
Fully Rand	256-16384	%75/28116
Fully Rand	32-32768	%7/5272

PART C)

For size 120:

N-way	Block Size/Cache Size	Result
2	128-8192	%93/13507
4	128-8192	%93/13507
8	128-8192	%93/13507
16	128-8192	%93/13507
2	256-16384	%47/6787
4	256-16384	%47/6787
8	256-16384	%47/6787
16	256-16384	%47/6787
2	32-32768	%4/545
4	32-32768	%4/545
8	32-32768	%4/545
16	32-32768	%4/545

For size 193:

N-way	Block Size/Cache Size	Result
2	128-8192	%100/37252
4	128-8192	%100/37252
8	128-8192	%100/37252
16	128-8192	%100/37252
2	256-16384	%75/28117
4	256-16384	%75/28117
8	256-16384	%75/28117
16	256-16384	%75/28117
2	32-32768	%5/2028
4	32-32768	%4/1356
8	32-32768	%4/1356
16	32-32768	%4/1356