

Prefetcher vs. No Prefetcher Performance Report

This report compares the performance of the system with a prefetcher enabled versus without a prefetcher, across various benchmarks. The "With Prefetcher" data is from the original `prefetcher_performance.csv` and "Without Prefetcher" data is from the manually extracted results.

CPU IPC Comparison

Benchmark	CPU IPC_pref	CPU IPC_no_pref
605.mcf_s-1536B	0.258479	0.271847
605.mcf_s-472B	0.501075	0.293962
605.mcf_s-994B	0.235164	0.180188
621.wrf_s-8065B	0.826684	0.815429
623.xalancbmk_s-10B	0.353863	0.349517
bfs-14	0.218122	0.145033
bfs-3	0.261813	0.179906
bfs-8	0.283494	0.18679
sssp-14	0.33284	0.274104
sssp-5	0.335138	0.269038

L1D Cache Metrics Comparison

Benchmark	L1D Miss %_pref	L1D Miss %_no_pref	L1D MPKI_pref	L1D MPKI_no_pref	L1D Prefetch Accuracy_pref	L1D Prefetch Accuracy_no_pref
605.mcf_s-1536B	31.4059	27.9226	56.6045	48.2086	1.24712	0.0
605.mcf_s-472B	8.84132	10.4901	51.522	46.4938	19.1698	0.0
605.mcf_s-994B	7.21644	9.71955	35.8601	37.5951	2.20331	0.0
621.wrf_s-8065B	2.91119	7.46939	11.7925	15.6614	16.3526	0.0
623.xalancbmk_s-10B	12.4066	13.1127	26.5506	26.9041	3.12679	0.0
bfs-14	6.29057	14.4749	36.9995	36.4123	4.3969	0.0
bfs-3	10.6814	18.3143	43.2177	42.7518	4.89392	0.0
bfs-8	4.32402	12.5192	28.3962	28.0338	6.18682	0.0
sssp-14	12.7993	21.6367	51.7248	51.4715	18.4418	0.0
sssp-5	12.6546	21.4169	51.2014	51.0718	16.3988	0.0

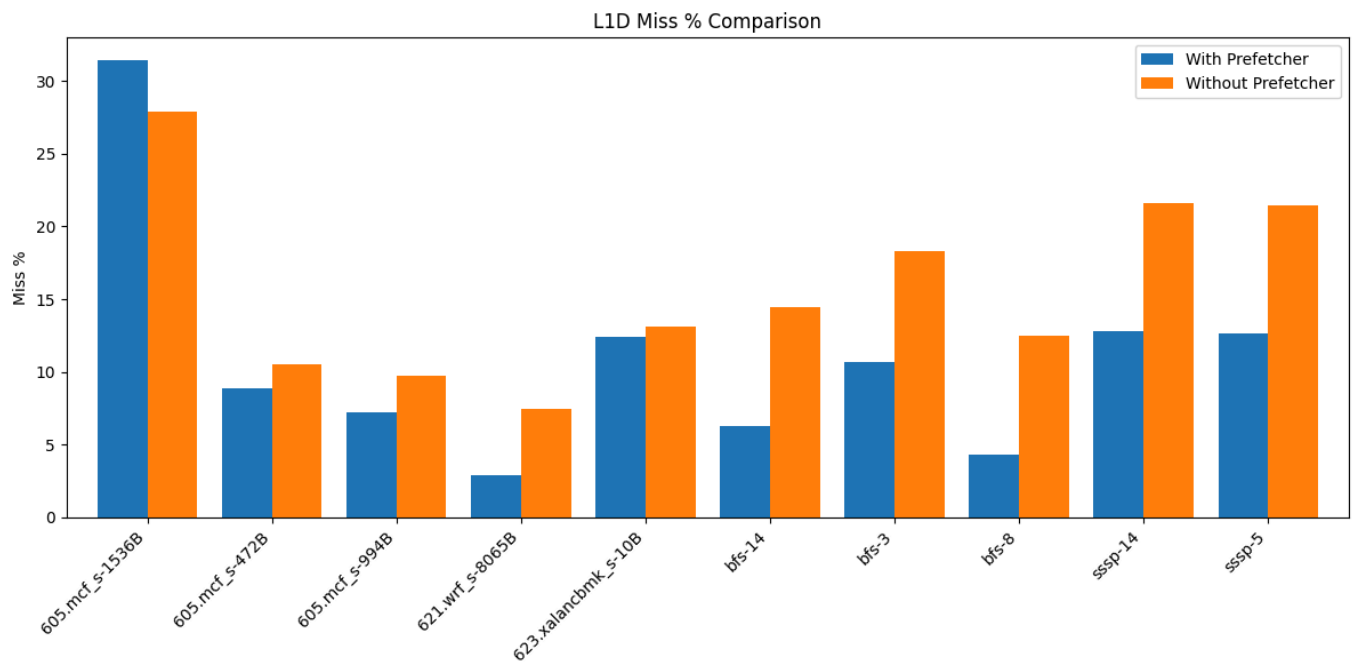
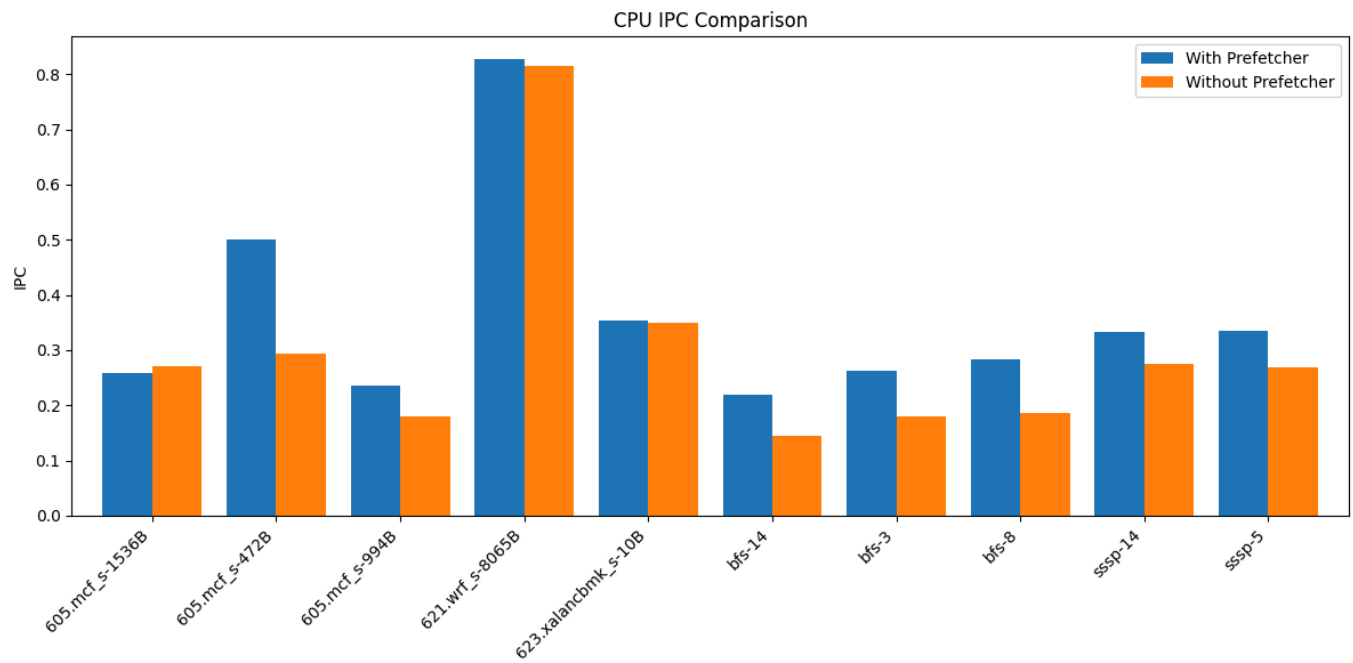
L2C Cache Metrics Comparison

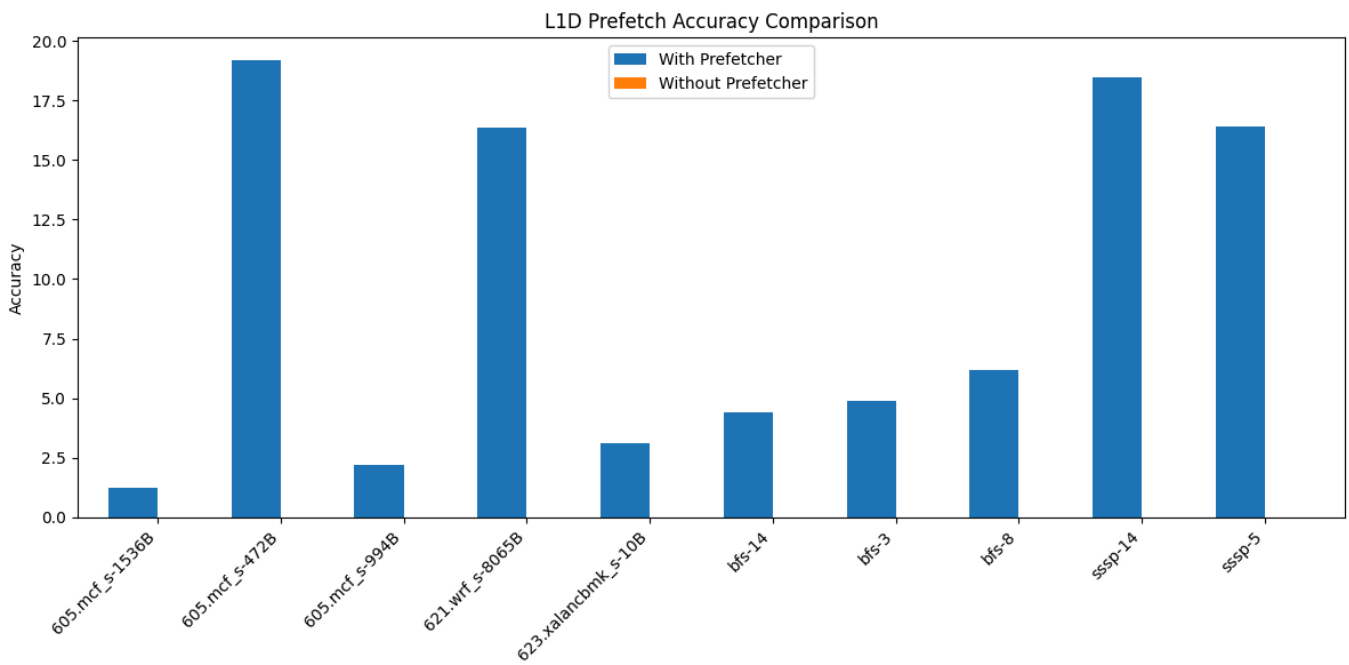
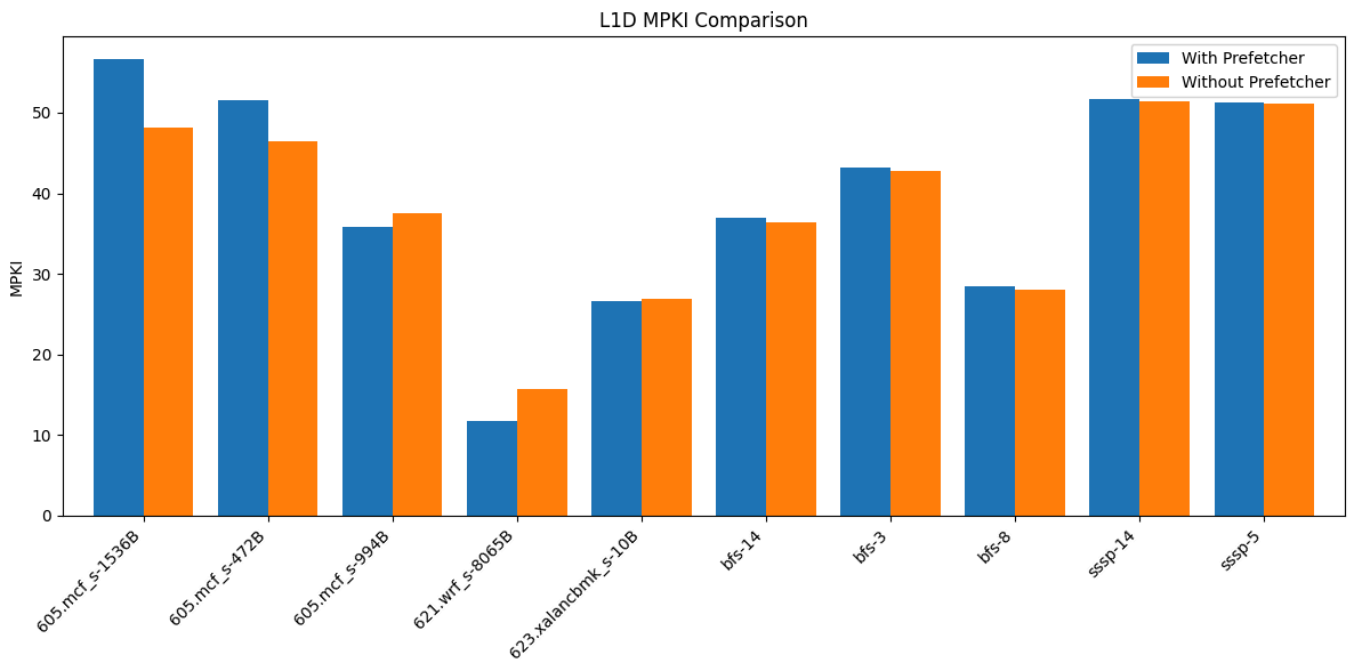
Benchmark	L2C Miss %_pref	L2C Miss %_no_pref	L2C MPKI_pref	L2C MPKI_no_pref	L2C Prefetch Accuracy_pref	L2C Prefetch Accuracy_no_pref
605.mcf_s-1536B	31.2559	50.1629	64.8372	48.125	6.82614	0.0
605.mcf_s-472B	44.6081	86.2364	62.1929	46.0182	14.6933	0.0
605.mcf_s-994B	30.3573	54.3452	26.758	30.7114	57.1148	0.0
621.wrf_s-8065B	23.7889	49.1122	9.10085	10.6766	20.8362	0.0
623.xalancbmk_s-10B	65.2778	70.1476	26.0515	25.5986	43.4089	0.0
bfs-14	12.8668	53.9454	32.1089	22.449	25.9175	0.0
bfs-3	15.5469	38.4846	27.3662	17.8386	26.3146	0.0
bfs-8	14.7611	62.0821	26.6869	19.8759	19.8246	0.0
sssp-14	44.2628	59.3817	46.4224	38.6779	11.2219	0.0
sssp-5	44.3935	59.4123	47.3628	38.5324	14.7224	0.0

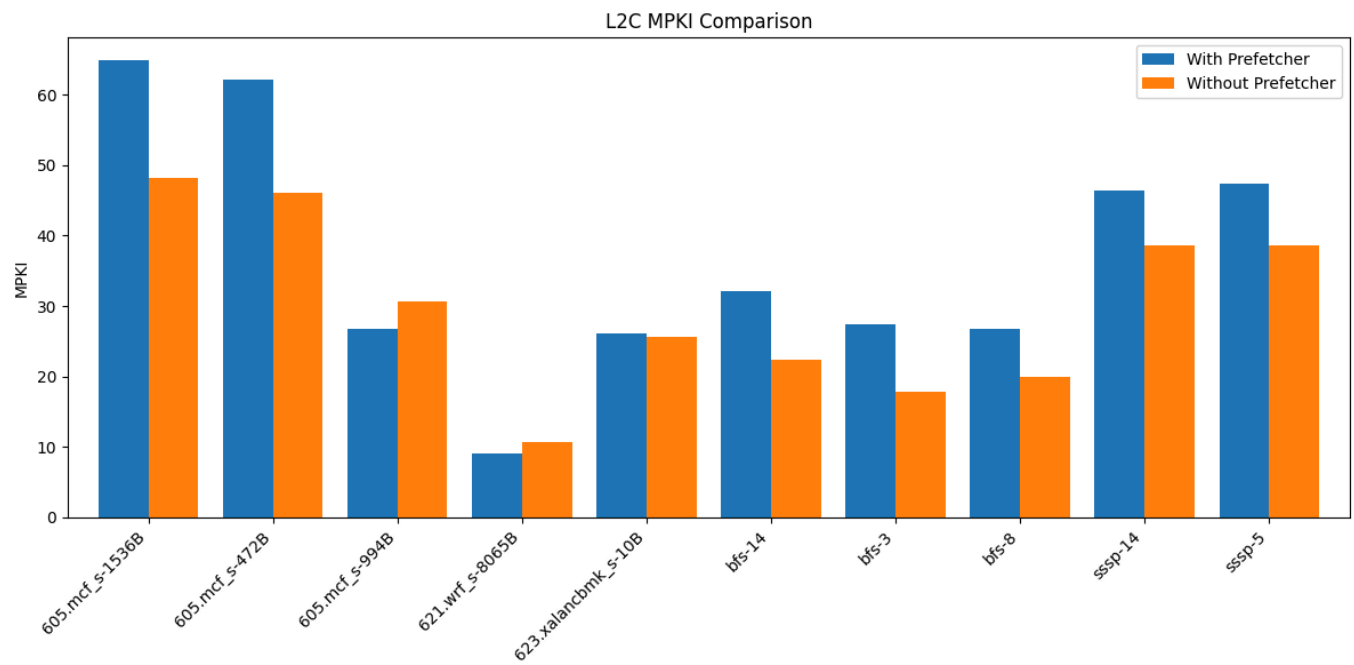
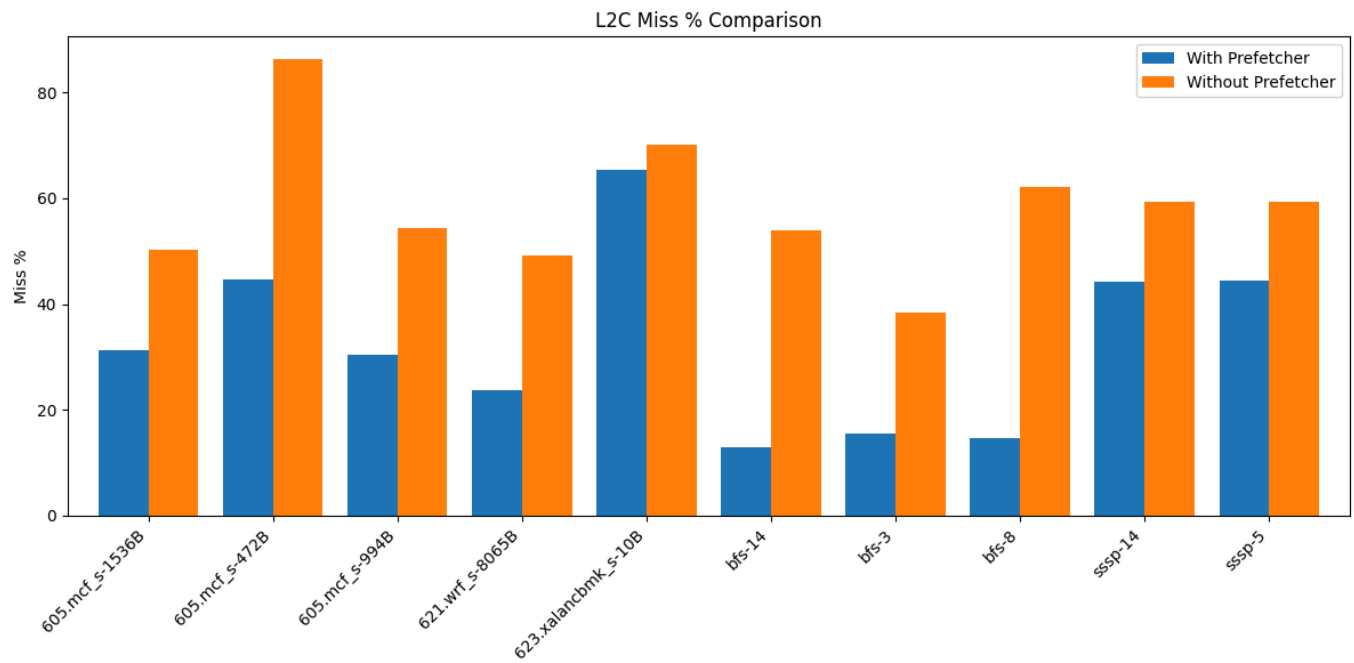
LLC Cache Metrics Comparison

Benchmark	LLC Miss %_pref	LLC Miss %_no_pref	LLC MPKI_pref	LLC MPKI_no_pref	LLC Prefetch Accuracy_pref	LLC Prefetch Accuracy_no_pref
605.mcf_s-1536B	30.4594	37.4552	26.294	26.294	2.34187	0.0
605.mcf_s-472B	76.9311	72.4152	51.2971	36.9892	0.0938997	0.0
605.mcf_s-994B	66.4436	73.625	18.6996	24.0089	2.3497	0.0
621.wrf_s-8065B	61.0664	53.035	7.78656	8.25844	0.506616	0.0
623.xalancbmk_s-10B	46.4063	43.1111	12.2631	11.1751	0.223061	0.0
bfs-14	81.7681	83.6302	29.1949	21.8109	0.0314396	0.0
bfs-3	87.824	87.093	26.2682	17.7725	0.0415526	0.0
bfs-8	86.5244	85.2562	25.3556	19.2116	0.0176923	0.0
sssp-14	49.2221	46.8875	27.0144	22.0732	0.651846	0.0
sssp-5	49.8046	44.6551	27.844	20.981	0.5641	0.0

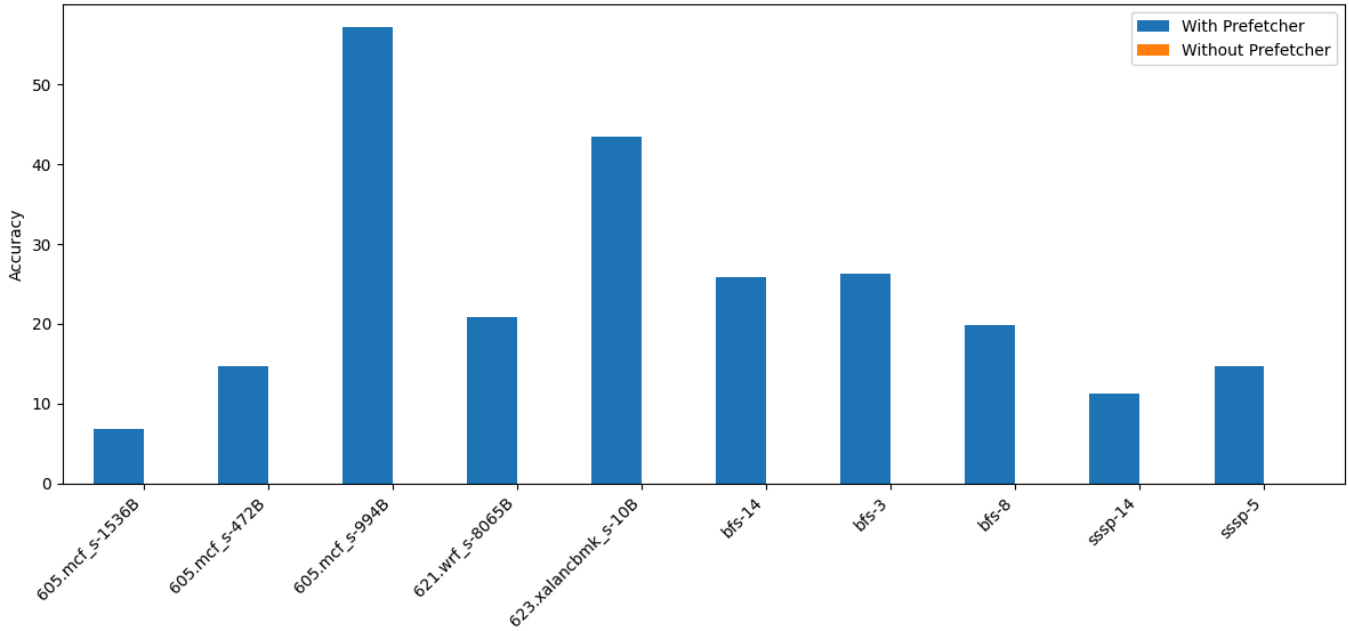
Performance Plots







L2C Prefetch Accuracy Comparison



LLC Miss % Comparison

