

Table 1: mainresult

Metric	Method	Maze					Puzzle		
		8	16	32	48	64	2	3	4
makespan	SCRIMP	29.09	50.83	86.87	108.34	117.13	15.44	30.28	45.16
	DCC	36.34	64.27	106.14	120.15	126.95	18.51	42.09	70.27
	MAPF-GPT-6M	33.96	48.85	68.16	96.31	113.98	7.99	22.18	39.83
	MAPF-GPT-85M	32.62	41.04	58.6	85.81	108.73	7.88	18.78	30.34
	Forcast-MAPF(Ours)	30.54	36.92	56.58	72.66	93.64	7.78	16.37	29.86
SoC	SCRIMP	147.8	380.21	1115.7	2495.48	4298.17	28.07	73.97	131.54
	DCC	165.62	447.0	1572.71	3326.54	5563.3	31.45	79.92	169.11
	MAPF-GPT-6M	152.68	363.87	996.34	2546.8	4705.7	13.46	59.12	138.99
	MAPF-GPT-85M	147.8	328.52	907.6	2224.84	4490.33	13.36	49.07	104.43
	Forcast-MAPF(Ours)	147.8	335.48	925.06	1880.2	3428.03	13.15	43.05	104.44

Table 2: predict action result

Metric	Method	Maze					Puzzle		
		8	16	32	48	64	2	3	4
Success Rate	Forcast-MAPF-2	1.0	0.99	0.94	0.74	0.43	1.0	0.92	0.84
	Forcast-MAPF-4	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0
	Forcast-MAPF-5	0.99	0.98	0.88	0.54	0.33	0.99	0.93	0.82
	Forcast-MAPF-3(Ours)	1.0	1.0	0.98	0.84	0.62	1.0	0.96	0.91
makespan	Forcast-MAPF-2	31.0	40.59	62.84	85.34	106.61	8.9	21.73	41.21
	Forcast-MAPF-4	128.0	128.0	128.0	128.0	128.0	127.41	128.0	128.0
	Forcast-MAPF-5	32.66	43.88	73.59	100.49	112.01	8.9	22.88	45.58
	Forcast-MAPF-3(Ours)	30.54	36.92	56.58	72.66	93.64	7.78	16.37	29.86
SoC	Forcast-MAPF-2	149.66	363.9	1054.84	2267.61	4260.61	15.28	59.49	147.68
	Forcast-MAPF-4	1016.37	2022.35	4030.72	6053.22	8085.63	247.88	370.7	487.0
	Forcast-MAPF-5	153.37	380.62	1161.12	2659.74	4685.41	15.29	60.73	159.81
	Forcast-MAPF-3(Ours)	147.8	335.48	925.06	1880.2	3428.03	13.15	43.05	104.44

Table 3: noise result

Metric	Method	Maze					Puzzle		
		8	16	32	48	64	2	3	4
Success Rate	Forecast-MAPF-0%	1.0	0.98	0.87	0.54	0.25	0.99	0.93	0.84
	Forecast-MAPF-5%	1.0	1.0	1.0	0.86	0.6	1.0	0.95	0.91
	Forecast-MAPF-10%	1.0	1.0	0.96	0.87	0.57	1.0	0.95	0.88
	Forecast-MAPF-30%	1.0	1.0	1.0	0.91	0.61	1.0	0.95	0.90
	Forecast-MAPF-20%(Ours)	1.0	1.0	0.98	0.84	0.62	1.0	0.96	0.91
makespan	Forecast-MAPF-0%	32.16	47.09	76.37	104.85	117.64	10.14	23.74	42.47
	Forecast-MAPF-5%	31.11	39.48	53.46	79.37	101.24	7.74	18.33	33.7
	Forecast-MAPF-10%	30.86	38.66	57.8	75.7	100.37	7.93	19.94	32.99
	Forecast-MAPF-30%	30.55	37.36	51.78	72.03	94.24	7.46	17.33	29.48
	Forecast-MAPF-20%(Ours)	30.54	36.92	56.58	72.66	93.64	7.78	16.37	29.86
SoC	Forecast-MAPF-0%	153.82	396.82	1214.34	2889.58	5071.79	17.71	63.17	149.0
	Forecast-MAPF-5%	149.02	349.88	937.11	2042.01	3888.6	12.94	47.67	118.2
	Forecast-MAPF-10%	150.13	346.52	955.91	1966.75	3765.93	13.34	52.95	116.34
	Forecast-MAPF-20%(Ours)	147.8	335.48	925.06	1880.2	3428.03	13.15	43.05	104.44

Table 4: greedy action result

Metric	Method	Maze					Puzzle		
		8	16	32	48	64	2	3	4
Success Rate	MAPF-GPT-6M	0.97	0.91	0.83	0.51	0.27	1.0	0.93	0.82
	MAPF-GPT-85M	0.98	0.97	0.94	0.72	0.38	0.99	0.95	0.89
	Forecast-MAPF w/o PA	1.0	1.0	0.93	0.61	0.38	1.0	0.95	0.81
	Forecast-MAPF(Ours)	1.0	1.0	0.98	0.84	0.62	1.0	0.96	0.91
makespan	MAPF-GPT-6M	33.96	48.85	68.16	96.31	113.98	7.99	22.18	39.83
	MAPF-GPT-85M	32.62	41.04	58.6	85.81	108.73	7.88	18.78	30.34
	Forecast-MAPF w/o PA	30.95	40.14	63.34	93.95	109.45	9.99	21.96	40.25
	Forecast-MAPF(Ours)	30.54	36.92	56.58	72.66	93.64	7.78	16.37	29.86
SoC	MAPF-GPT-6M	152.68	363.87	996.34	2546.8	4705.7	13.46	59.12	138.99
	MAPF-GPT-85M	147.8	328.52	907.6	2224.84	4490.33	13.36	49.07	104.43
	Forecast-MAPF w/o PA	149.84	355.27	1020.85	2443.12	4475.76	17.51	60.13	145.57
	Forecast-MAPF(Ours)	147.8	335.48	925.06	1880.2	3428.03	13.15	43.05	104.44

Metric	Method	Random				Warehouse				City tile						
		8	16	32	48	8	16	32	48	8	16	32	48			
makespan	SCRIMP	26.25	10.36	41.93	62.41	119.18	56.54	92.48	68.17	76.35	81.43	94.79	117.87	146.8	162.25	178.66
	D+C	29.79	48.23	77.12	111.89	126.12	66.66	88.1	111.23	126.75	128.8	128.9	120.8	154.58	197.82	231.7
	MAPP-GPT+M	27.4	32.61	42.24	60.52	84.91	66.85	70.38	85.69	110.85	125.28	127.95	115.62	149.3	189.41	216.11
	MAPP-GPT+M	27.2	32.2	38.8	53.35	71.9	59.82	67.3	77.15	99.86	123.21	127.16	126.51	168.82	195.1	226.50
	Forecast-MAPP (Ours)	26.98	31.7	39.48	49.62	63.29	59.88	66.88	73.66	84.93	101.6	121.69	114.6	131.18	148.48	172.62
SoC	SCRIMP	127.47	278.4	677.59	1298.72	2269.22	1070.68	2339.88	3813.05	4485.86	7453.0	9807.24	3369.35	8776.84	13031.45	19368.83
	D+C	133.85	310.59	940.39	2185.59	4085.27	1099.18	2610.85	4676.58	7821.88	11090.3	14655.75	3297.14	7480.8	13084.23	21121.85
	MAPP-GPT+M	125.44	276.5	677.32	1385.66	2793.27	1039.62	2229.48	3792.36	6158.68	9782.17	13943.52	3151.58	7862.88	14058.92	22981.85
	MAPP-GPT+M	124.8	269.16	645.85	1324.65	2361.71	1031.52	2186.11	3587.2	5675.18	8906.46	12976.12	3216.4	8855.88	14508.58	24804.5
	Forecast-MAPP (Ours)	124.97	270.21	655.45	1234.88	2212.84	1048.95	2295.47	3724.5	5620.55	8204.73	12113.64	3165.61	7127.8	11976.14	18744.57

Table 5: main result total

Metric	Method	Random					Warehouse					City tile				
		8	16	32	48	64	32	64	96	128	160	192	64	128	192	256
Success Rate	Forecast-MAPP-2	1.0	1.0	0.99	0.83	0.75	1.0	1.0	1.0	0.84	0.88	0.89	0.99	0.83	0.75	0.68
	Forecast-MAPP-4	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.88	0.88	0.88	0.0	0.0	0.0	0.0
	Forecast-MAPP-8	1.0	1.0	0.98	0.84	0.7	1.0	1.0	1.0	0.99	0.77	0.82	0.99	0.91	0.8	0.83
	Forecast-MAPP-16	1.0	1.0	1.0	0.98	0.91	1.0	1.0	1.0	1.0	0.95	0.88	1.0	0.94	0.89	0.77
	Forecast-MAPP-32	27.56	33.26	43.3	60.29	80.54	60.86	67.42	76.91	92.03	117.34	126.85	115.82	137.12	163.2	186.35
makespan	Forecast-MAPP-2	128.0	328.0	128.0	128.0	128.0	50.45	66.25	73.27	81.87	101.12	121.47	255.8	216.8	256.8	256.8
	Forecast-MAPP-4	27.42	33.7	48.57	64.3	86.88	60.51	66.96	75.7	84.51	105.19	123.23	116.32	139.36	162.43	184.4
	Forecast-MAPP-8	26.9	31.7	39.48	59.62	63.29	59.89	66.88	76.06	84.93	test110.16	121.69	114.6	test111.18	test1118.48	test1172.82
	Forecast-MAPP-16	121.23	185.81	181.15	1437.84	2175.04	1037.52	2278.71	3813.05	4576.82	8138.56	13101.79	3223.21	7618.21	13109.36	20844.87
	Forecast-MAPP-32	10.88.85	2005.59	3968.58	5931.41	7981.24	1042.55	2231.62	3661.79	5415.11	7955.68	13080.89	16175.48	32863.27	47700.82	63338.87
SoC	Forecast-MAPP-2	129.18	289.8	780.11	1624.8	2949.81	1048.26	2238.83	3696.33	5543.94	8260.23	12101.05	3323.81	7629.24	13927.62	22271.59
	Forecast-MAPP-32	124.97	270.21	655.45	1234.88	2212.84	1048.95	2255.47	3724.5	5620.55	8204.73	12113.64	3165.61	7127.8	11976.14	18744.57

Table 6: predict action result

Metric	Method	Random					Warehouse					City tile				
		8	16	32	48	64	32	64	96	128	160	192	256	320	384	448
Success Rate	Forecast-MAPP-2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Forecast-MAPP-4	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Forecast-MAPP-8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Forecast-MAPP-16	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Forecast-MAPP-32 (Ours)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
makespan	Forecast-MAPP-2	17.24	12.8	12.8	12.8	12.8	13.13	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
	Forecast-MAPP-4	37.2	12.9	48.4	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
	Forecast-MAPP-8	27.25	12.9	48.4	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
	Forecast-MAPP-16	17.25	12.9	48.4	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
	Forecast-MAPP-32	17.25	12.9	48.4	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
SoC	Forecast-MAPP-2	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24
	Forecast-MAPP-4	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4
	Forecast-MAPP-8	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4
	Forecast-MAPP-16	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4
	Forecast-MAPP-32	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4

Table 7: noise result

Metric	Method	Random								Warehouse								City tile			
		8	16	32	48	64	96	128	160	192	256	320	384	448	512	576	640	704	768		
Success Rate	MAPP-GPT+M	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	MAPP-GPT+M	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	Forecast-MAPP w/o PL	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	Forecast-MAPP (Ours)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	Forecast-MAPP (Ours)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
makespan	MAPP-GPT+M	17.2	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8		
	Forecast-MAPP w/o PL	17.2	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8		
	Forecast-MAPP (Ours)	17.2	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8		
	Forecast-MAPP (Ours)	17.2	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8		
	Forecast-MAPP (Ours)	17.2	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8		
SoC	MAPP-GPT+M	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24	117.24		
	Forecast-MAPP w/o PL	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4		
	Forecast-MAPP (Ours)	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4		
	Forecast-MAPP (Ours)	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4		
	Forecast-MAPP (Ours)	107.49	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4		