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 CSC380:Artificial Intelligence
 Project 2: War Game
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R = Random

M = Minimax, depth 4

A = Alpha-beta pruned minimax, depth 5

Blue vs Green

**Games with a random player were played 50 times and averages were taken

Kalamazoo

	R vs R	R vs M	R vs A	M vs M	M vs R	M vs A	A vs A	A vs R	A vs M
Blue score	18	10	9	19	27	19	22	26	19
Green score	16	24	25	16	7	16	13	8	16
Moves	25	25	25	25	25	25	25	25	25
Blue avg time	0.01 ms	0.01 ms	0.01 ms	154.9 ms	153.2 ms	147.1 ms	717.1 ms	638.9 ms	596.3 ms
Green avg time	0.01 ms	154.3 ms	627.8 ms	148.3 ms	0.01 ms	570.3 ms	746.4 ms	0.01 ms	151.1 ms

Peoria

	R vs R	R vs M	R vs A	M vs M	M vs R	M vs A	A vs A	A vs R	A vs M
Blue score	718	331	290	602	1113	600	702	1042	797
Green score	580	967	1008	697	185	699	597	256	502
Moves	25	25	25	25	25	25	25	25	25
Blue avg time	0.01 ms	0.01 ms	0.01 ms	142.0 ms	147.1 ms	149.5 ms	406.5 ms	519.29 ms	501.2 ms
Green avg time	0.01 ms	150.1 ms	488.4 ms	137.1 ms	0.01 ms	462.7 ms	388.7 ms	0.01 ms	147.2 ms

Piqua

	R vs R	R vs M	R vs A	M vs M	M vs R	M vs A	A vs A	A vs R	A vs M
Blue score	13	8	8	13	18	13	13	17	13
Green score	11	16	16	12	6	12	12	7	12
Moves	25	25	25	25	25	25	25	25	25
Blue avg time	0.01 ms	0.01 ms	0.01 ms	123.7 ms	147.2 ms	121.6 ms	208.1 ms	280.4 ms	192.2 ms
Green avg time	0.002 ms	150.2 ms	323.7 ms	114.4 ms	0.01 ms	170.8 ms	168.6 ms	0.01 ms	113.6 ms

Punxsutawney

	R vs R	R vs M	R vs A	M vs M	M vs R	M vs A	A vs A	A vs R	A vs M
Blue score	50	16	19	51	81	51	49	78	51
Green score	44	78	75	44	13	44	46	16	44
Moves	25	25	25	25	25	25	25	25	25
Blue avg time	0.01 ms	0.012 ms	0.015 ms	129.5 ms	151.3 ms	122.7 ms	457.5 ms	464.5 ms	411.0 ms
Green avg time	0.002 ms	153.6 ms	488.5 ms	118.6 ms	0.01 ms	378.2 ms	428.8 ms	0.01 ms	116.0 ms

Wallawalla

	R vs R	R vs M	R vs A	M vs M	M vs R	M vs A	A vs A	A vs R	A vs M
Blue score	37	16	16	40	61	39	49	63	42
Green score	38	59	59	36	14	37	27	12	34
Moves	25	25	25	25	25	25	25	25	25
Blue avg time	0.01 ms	0.012 ms	0.014 ms	153.0 ms	160.6 ms	150.8 ms	447.9 ms	534.8 ms	515.7 ms
Green avg time	0.003 ms	159.7 ms	512.4 ms	145.3 ms	0.01 ms	423.5 ms	556.5 ms	0.01 ms	145.3 ms