

Data:

30 chromosomes in population,
 each chromosome has 10 gens – 1 gen for 1 game(10 games in total).

Multipoint X-over.

0.1% mutation for each gen.

Fitness: wins with 10 random opponents.

Rules:

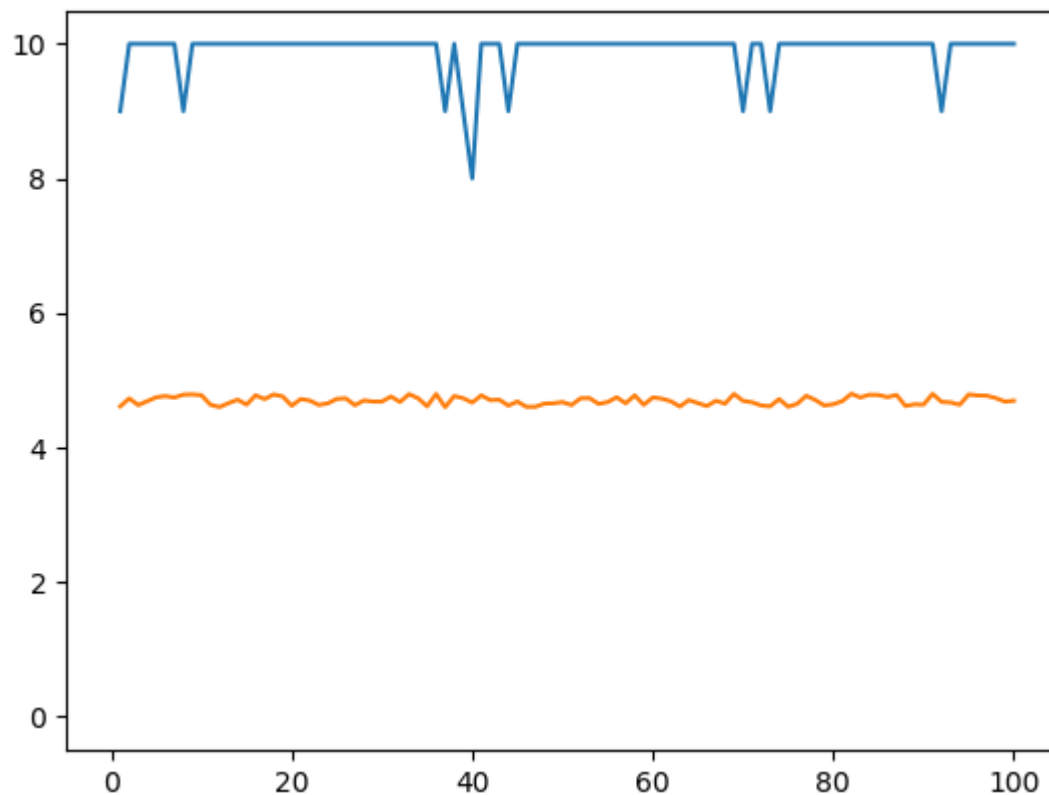
gen of 1st chromo gen of 2nd chromo 'reward' for 1st chromo 'reward' for 2nd chromo

1	1	1	1
1	0	5	0
0	1	0	5
0	0	3	3

Graph of max and average fitness for 100 iterations:

Blue line – max fitness in population.

Orange line – average fitness of population



Games of the best chromosome in started population:

Best value = lowest value.

First chromosome – best chromosome of the population.

Second – random chromosome from population.

Gens	values
Win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	16
[0, 0, 1, 1, 1, 1, 1, 1, 0, 0]	31
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	16
[0, 1, 0, 1, 1, 1, 0, 1, 1, 0]	31
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	16
[0, 1, 1, 1, 1, 1, 0, 1, 0, 0]	31
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	15
[1, 1, 1, 1, 0, 0, 1, 1, 0, 0]	30
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	13
[1, 1, 1, 1, 0, 1, 1, 0, 0, 1]	33
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	24
[1, 0, 1, 0, 0, 1, 0, 0, 0, 1]	29
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	23
[1, 0, 0, 1, 1, 0, 1, 0, 0, 0]	28
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	20
[0, 0, 1, 0, 1, 1, 0, 1, 1, 0]	30
draw	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	27
[1, 0, 0, 1, 0, 0, 0, 0, 0, 1]	27
win	
[0, 1, 0, 0, 0, 0, 1, 1, 0, 0]	19
[1, 1, 1, 0, 1, 0, 0, 1, 0, 0]	29

Games of the best chromosome in intermediate population:

Gens	values
win	
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	12
[1, 1, 1, 1, 1, 0, 1, 0, 1, 0]	37

win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	25	
[0, 0, 1, 0, 1, 0, 0, 0, 1, 0]	30	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	24	
[0, 1, 0, 0, 1, 1, 0, 0, 0, 0]	29	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	22	
[0, 0, 1, 0, 0, 0, 1, 0, 1, 1]	32	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	15	
[0, 0, 0, 1, 1, 1, 1, 0, 1, 1]	35	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	12	
[0, 1, 0, 1, 1, 1, 1, 0, 1, 1]	37	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	25	
[0, 0, 0, 0, 1, 0, 0, 1, 0, 1]	30	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	12	
[0, 1, 0, 1, 1, 1, 1, 0, 1, 1]	37	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	23	
[1, 0, 1, 0, 0, 1, 0, 0, 0, 0]	28	
win		
[1, 0, 0, 0, 0, 1, 0, 0, 0, 0]	21	
[1, 1, 1, 0, 0, 0, 0, 1, 0, 0]	31	

Games of the best chromosome in last population:

Gens	values
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	13
[1, 1, 1, 1, 0, 1, 0, 1, 1, 0]	33
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	23
[0, 0, 1, 1, 0, 1, 0, 0, 1, 0]	28
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	9
[1, 0, 1, 1, 1, 1, 1, 1, 1, 0]	34
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	10
[1, 1, 1, 1, 0, 0, 1, 1, 1, 1]	35
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	9
[1, 0, 1, 1, 1, 1, 1, 1, 1, 0]	34

win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	9
[1, 0, 1, 1, 1, 1, 1, 1, 1, 0]	34
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	14
[1, 1, 1, 0, 1, 1, 1, 0, 0, 1]	34
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	14
[1, 1, 1, 0, 1, 1, 1, 0, 0, 1]	34
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	13
[1, 1, 1, 1, 0, 1, 0, 1, 1, 0]	33
win	
[0, 0, 0, 1, 1, 0, 0, 1, 0, 0]	23
[0, 0, 1, 1, 0, 1, 0, 0, 1, 0]	28