

Contemporary Intelligent Information Technology (CIIT)

10/22/2018

Prisoner's Dilemma

Population size: 50

Chromosome size: 64

Rules of the play:

Player 1	Player 2	Points P1	Points P2
No (0)	No (0)	1	1
No (0)	Yes (1)	5	0
Yes (1)	No (0)	0	5
Yes (1)	Yes (1)	3	3

*One point crossover

*Truncate selection

The 1st generation:

- The best player: #7

Game number	Number of player	Strategy	Scores
1	7	1111000011010010101001100101110101000111000100100001001011110111	129
	16	0001110111110001101111000011111110110010110011011100011011001010	154
2	7	1111000011010010101001100101110101000111000100100001001011110111	132
	33	10000110001000011000110101110101011110111111001100110111000111	152
3	7	1111000011010010101001100101110101000111000100100001001011110111	147
	31	1101011101110101011010000001000000010110000110000111111010111010	142
4	7	1111000011010010101001100101110101000111000100100001001011110111	130
	21	01110011101110000111010101111100001101000001011111101101100001	150
5	7	1111000011010010101001100101110101000111000100100001001011110111	137
	3	0000100011001010100111011001001010101111000001111101011100111111	147
6	7	1111000011010010101001100101110101000111000100100001001011110111	150
	42	0001011010010110110001001100100100000011000001101110011011100111	135
7	7	1111000011010010101001100101110101000111000100100001001011110111	146
	32	1111000000110110010100110100101111001100000000011000111101011110	141

8	7	1111000011010010101001100101110101000111000100100001001011110111	138
	24	1100000111101101011010101010111111010100010111110011000011001000	148
9	7	1111000011010010101001100101110101000111000100100001001011110111	168
	41	1000010010100101111100100001101101100000000001010000011101010001	133
10	7	1111000011010010101001100101110101000111000100100001001011110111	182
	28	0001111000000001000010011111000010111001000101000001010000000101	132



Fitness (the won games number): 5

The **middle** generation:

- The best player: #17

Game number	Number of player	Strategy	Scores
1	17	1111010000111100011010011011100000110110110001111110111000001110	138
	49	00111111111101110100101010101111110100100100000010110111000000110	133
2	17	1111010000111100011010011011100000110110110001111110111000001110	148
	7	0011001011110000010001000010111100011000110010111000011111111110	133
3	17	1111010000111100011010011011100000110110110001111110111000001110	167
	19	0000101001000111001001111001000100010010001101101100110111000010	127
4	17	1111010000111100011010011011100000110110110001111110111000001110	148
	22	0010110010011011110111001011111100100000111000000010001011011110	133
5	17	1111010000111100011010011011100000110110110001111110111000001110	158
	18	1011110110110011000000010010010011000001110001110001110011000110	128
6	17	1111010000111100011010011011100000110110110001111110111000001110	128
	27	111101100110110001010001110100101000100111111011110001101001111	138
7	17	1111010000111100011010011011100000110110110001111110111000001110	115
	47	0010011010111000011011111111111000111001000110101111101101111111	145
8	17	1111010000111100011010011011100000110110110001111110111000001110	153
	21	0001000110110111010000101111101011011001001101010101011001001000	133
9	17	1111010000111100011010011011100000110110110001111110111000001110	144
	11	1110000100011010101101101111000000001000101101011001111100111110	134
10	17	1111010000111100011010011011100000110110110001111110111000001110	140
	23	0010010011101000110000001000111100111001110101101101111100110111	135



Fitness (the won games number): 8

The **last** generation:

- The best player: **#5**

Game number	Number of player	Strategy	Scores
1	5	110000111001111010001011100001101111101101101011101111011100100	159
	37	1101011110000110000000000110110110011010100010011010010111011010	119
2	5	110000111001111010001011100001101111101101101011101111011100100	173
	24	0100101001100110110000101001010110110010100001100010000100011011	118
3	5	110000111001111010001011100001101111101101101011101111011100100	170
	4	1000100001000000111000011000111100110001111100000101111000101100	115
4	5	110000111001111010001011100001101111101101101011101111011100100	160
	39	1011111010101001100000011110001000111100100000110000111110001100	120
5	5	110000111001111010001011100001101111101101101011101111011100100	168
	42	0111000101001100111011000000100110100001011001010010110010010011	118
6	5	110000111001111010001011100001101111101101101011101111011100100	148
	31	0001010011000011011110111010001110101000010110011001111011010110	123
7	5	110000111001111010001011100001101111101101101011101111011100100	163
	6	1101100100010111000000110101101100001010010110001011000001110011	118
8	5	110000111001111010001011100001101111101101101011101111011100100	139
	13	011011110100011100111100010111011111000101101100000010111110011	134
9	5	110000111001111010001011100001101111101101101011101111011100100	140
	49	0011101110010010010011011000011001110011101101011000100111101111	125
10	5	110000111001111010001011100001101111101101101011101111011100100	166
	0	00110110010000000100111111111011101010100101000010111000100000	121

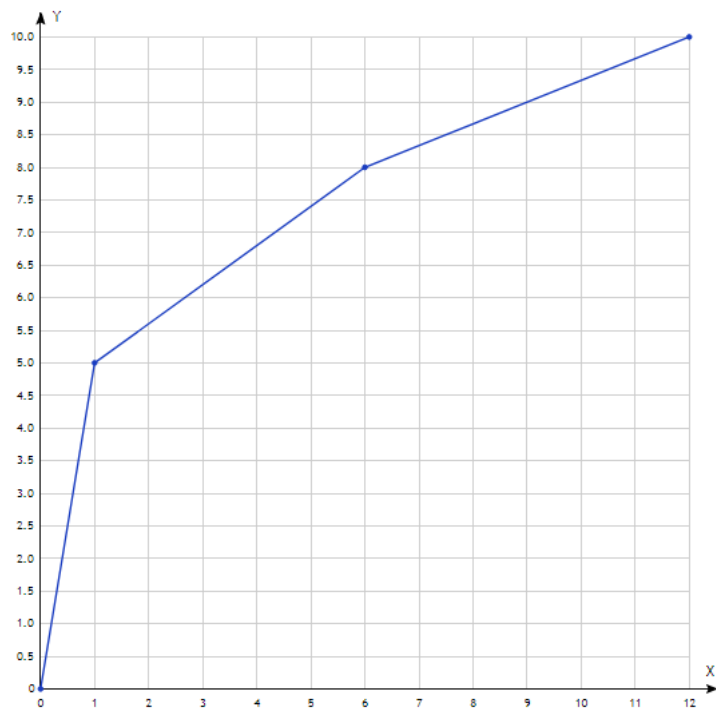


Fitness (the won games number): **10**

Evolution:

X-axis – the number of generation

Y-axis – the best fitness



X-axis – the number of generation

Y-axis – the average fitness

