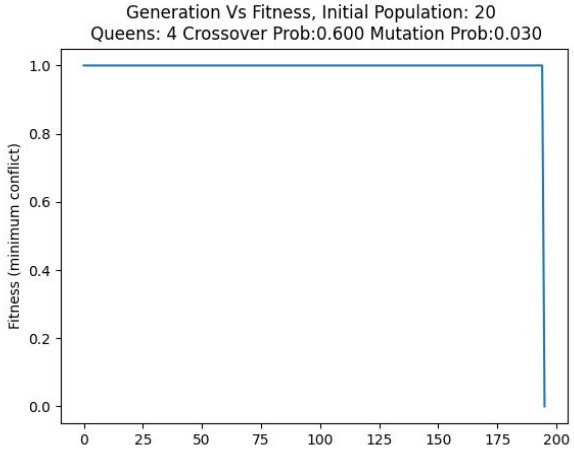
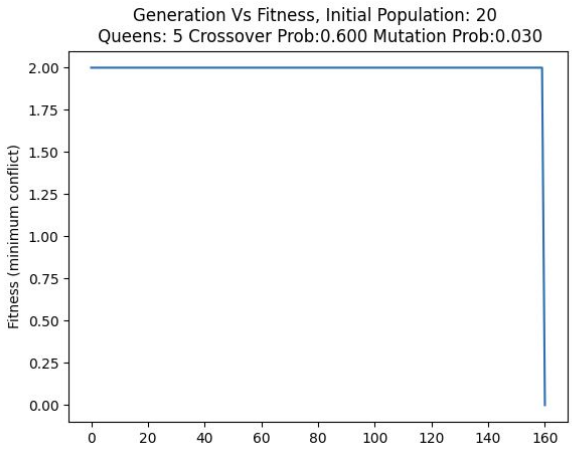
GENERATION VS FITNESS GRAPH FOR VARIOUS HYPER-PARAMETER VARIATION

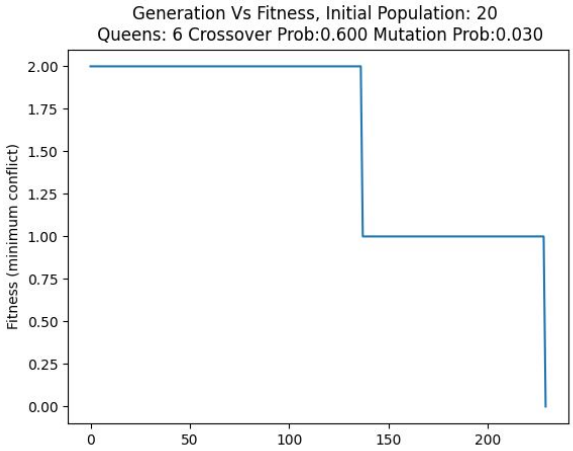
Number of Queens Variation

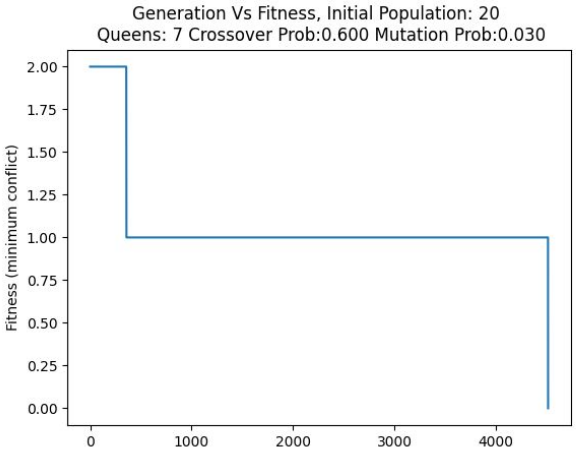
	Number of Queens	Population Size	Crossover Probability	Mutation Probability
1	**4**	20	0.6	0.03
2	**5**	20	0.6	0.03
3	**6**	20	0.6	0.03
4	**7**	20	0.6	0.03
5	**8**	20	0.6	0.03

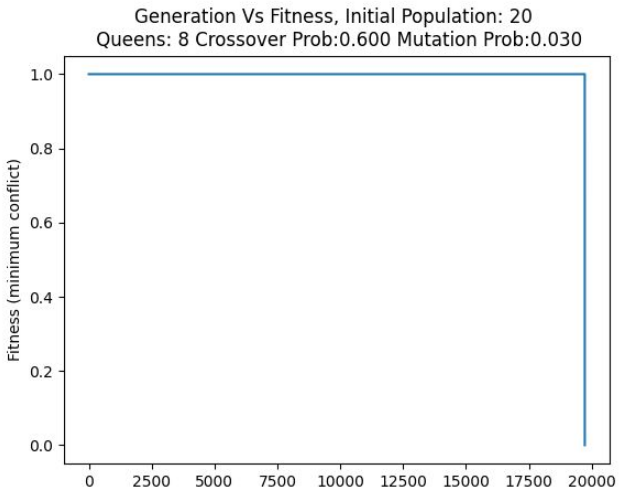
(x-axis: Generation & y-axis: Fitness (minimum conflict))





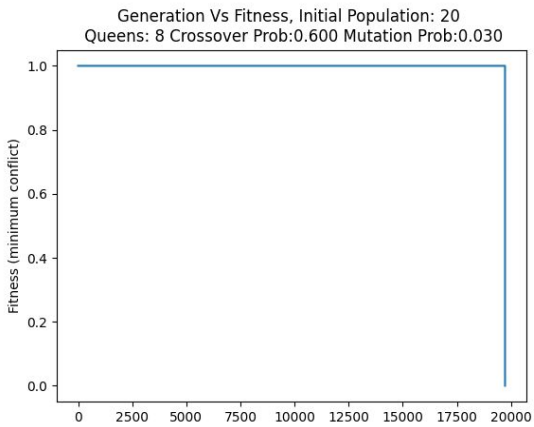


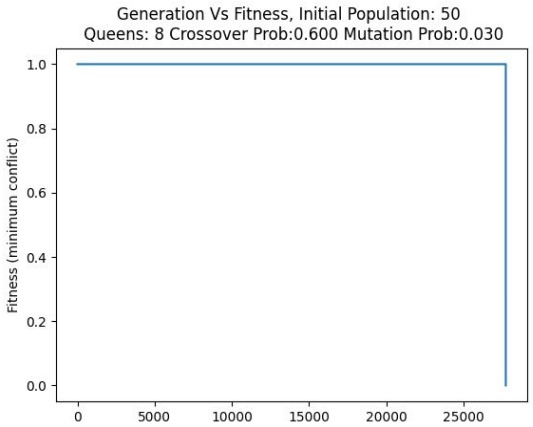


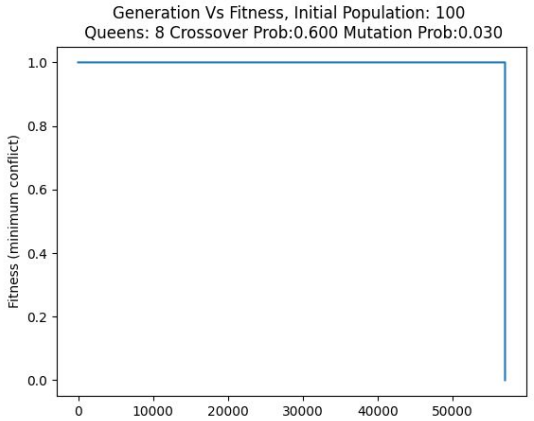


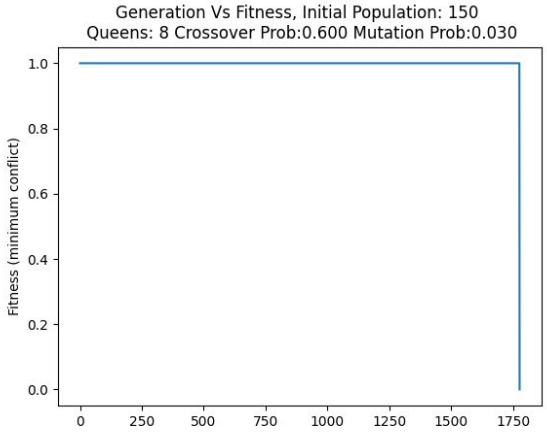
Population Size Variation

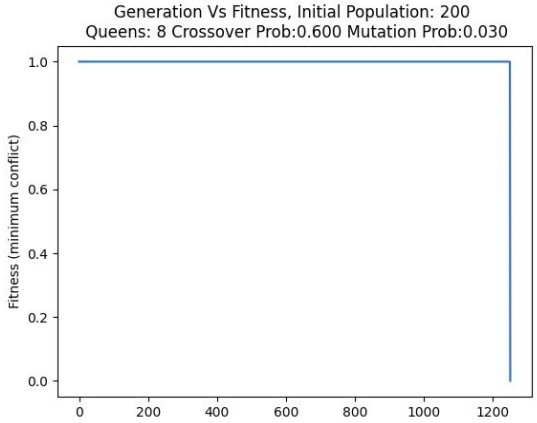
	Number of Queens	Population Size	Crossover Probability	Mutation Probability
1	8	**20**	0.6	0.03
2	8	**50**	0.6	0.03
3	8	**100**	0.6	0.03
4	8	**150**	0.6	0.03
5	8	**200**	0.6	0.03


Generation Vs Fitness, Initial Population: 20
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.030
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
2500
5000
7500
10000
12500
15000
17500
20000


Generation Vs Fitness, Initial Population: 50
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.030
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
5000
10000
15000
20000
25000

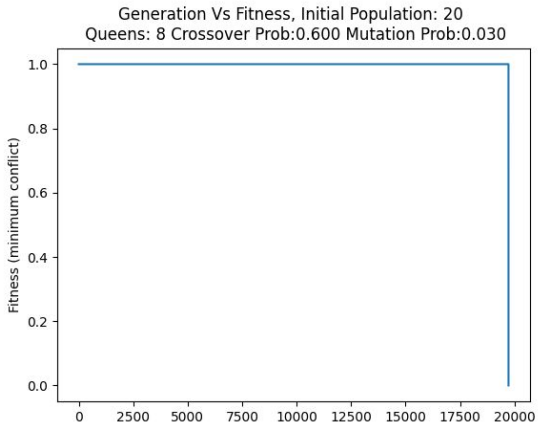

Generation Vs Fitness, Initial Population: 100
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.030
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
10000
20000
30000
40000
50000

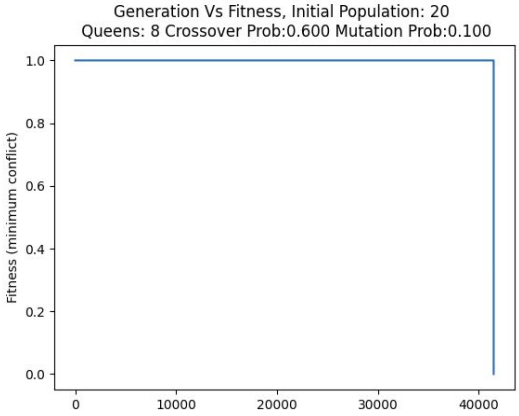

Generation Vs Fitness, Initial Population: 150
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.030
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
250
500
750
1000
1250
1500
1750

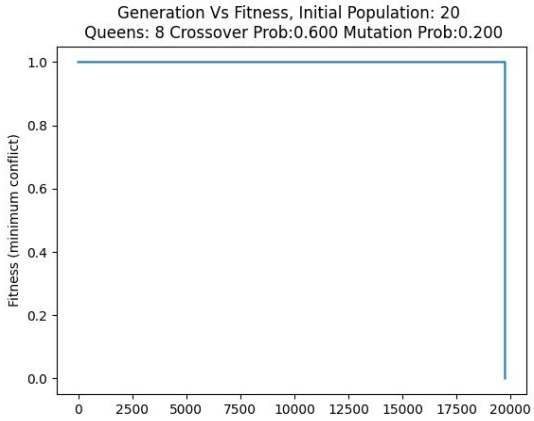

Generation Vs Fitness, Initial Population: 200
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.030
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
200
400
600
800
1000
1200

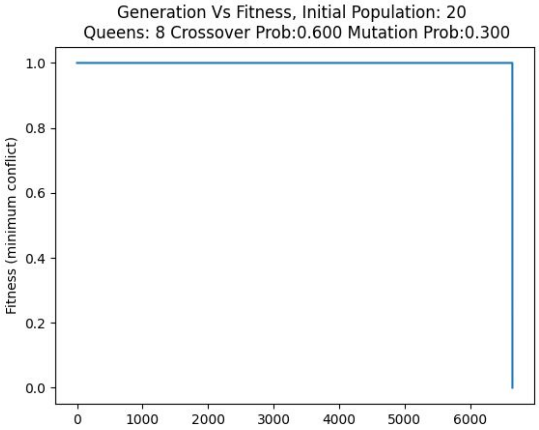
Mutation Probability Variation

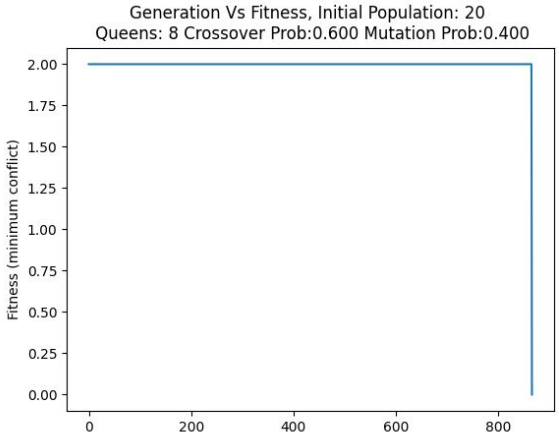
	Number of Queens	Population Size	Crossover Probability	Mutation Probability
1	8	20	0.6	**0.03**
2	8	20	0.6	**0.1**
3	8	20	0.6	**0.2**
4	8	20	0.6	**0.3**
5	8	20	0.6	**0.4**


Generation Vs Fitness, Initial Population: 20
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.030
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
2500
5000
7500
10000
12500
15000
17500
20000


Generation Vs Fitness, Initial Population: 20
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.100
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
10000
20000
30000
40000

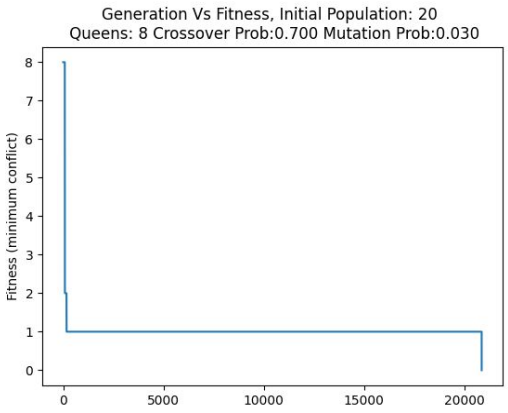

Generation Vs Fitness, Initial Population: 20
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.200
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
2500
5000
7500
10000
12500
15000
17500
20000

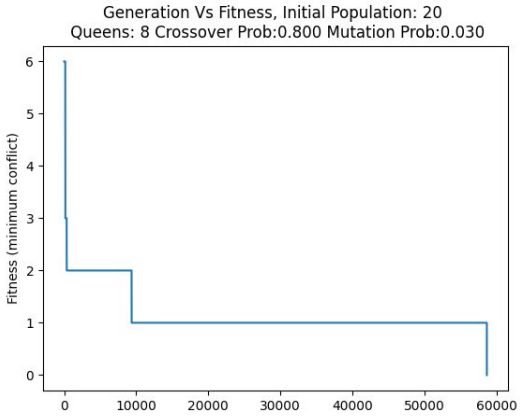

Generation Vs Fitness, Initial Population: 20
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.300
Fitness (minimum conflict)
0.0
0.2
0.4
0.6
0.8
1.0
0
1000
2000
3000
4000
5000
6000

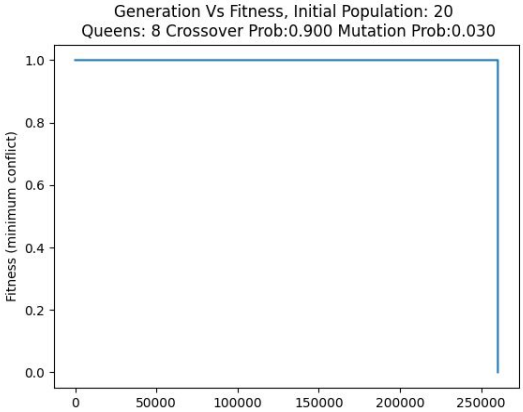

Generation Vs Fitness, Initial Population: 20
Queens: 8 Crossover Prob:0.600 Mutation Prob:0.400
Fitness (minimum conflict)
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0
200
400
600
800

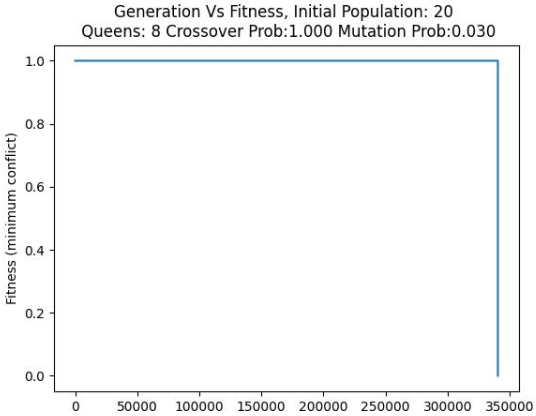
Crossover Probability

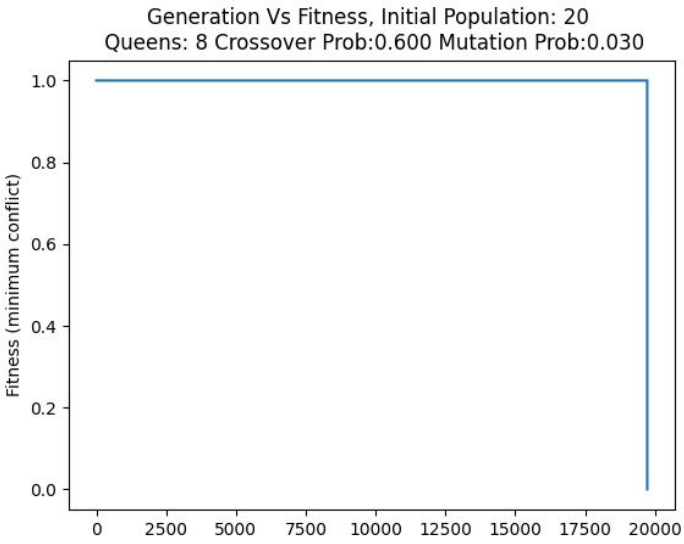
	Number of Queens	Population Size	Crossover Probability	Mutation Probability
1	8	20	**0.6**	0.03
2	8	20	**0.7**	0.03
3	8	20	**0.8**	0.03
4	8	20	**0.9**	0.03
5	8	20	**1.0**	0.3











Sample Output