A N-queen problem solution by Python

Hyperparameters of the algorithm are as follow:

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描述已自动生成

Algorithm part:

1.First use shuffle to initialize the population.

2.During the evolution loop, randomly choose parents from the first 20% of all population.

Do crossover according to the crossover probability. Children will remain same to their parents if they are not chosen to do the crossover.

Do mutation according to the mutation probability.

Kill people that exceed the maximum population size.

Sort the population w.r.t the cost after every step to ensure that good offspring can survive.

3.The terminal condition is that the best cost should be zero which means a solution to the N-queen problem is found.

The detailed implement can be found in the code.

The .exe file is in the dict repository.