

Fourth problem set

Due date: 2019.03.07, 9.00

Topic: simple genetic algorithms

You have to send your solutions via email (evolalghf@gmail.com). You have to solve them unassisted, unless it's marked with a star. The problems marked * can be solved in groups of two. You can get maximum 10 points.

1. (4+2 points) Three individuals are coded $e_1 = 00010$, $e_2 = 01001$ and $e_3 = 11001$. How many schemes fits either e_1 or e_2 ? How many schemes fits all three?
2. (4 points) Two individuals are coded $e_1 = 0101$ and $e_2 = 0100$. How many different offspring can they have if we use one-point crossover? And if we use uniform crossover?
3. (10 points)* Find that largest codebook you can for the one error correcting codebook problem (using 8-long bit sequences as words).