Tema 3

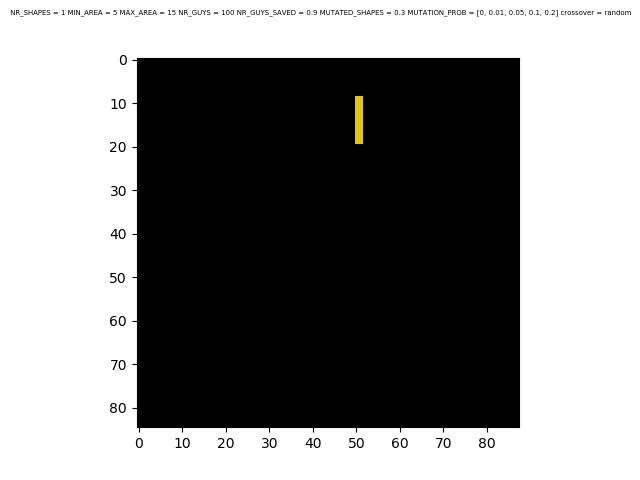
**Imagini de TEST:**

** **

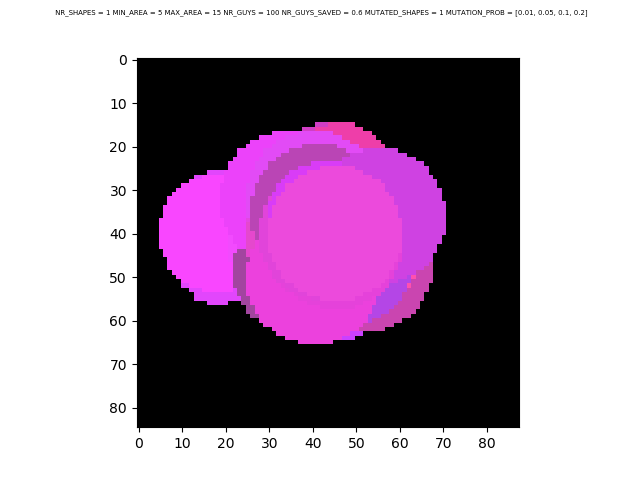
**Metoda A:**

Daca aplicam algoritmul folosind indivizi cu o singura figura atunci toti indivizii vor tinde la o figura care are fitness-ul cat mai bun, astfel ca in final vom avea toti indivizii foarte asemanatori, suprapunandu-se si neaducand un plus de informatie imaginii:

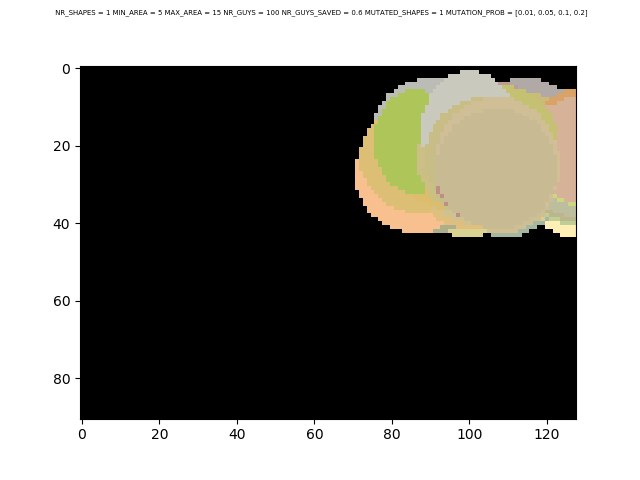
Folosind dreptunghiuri pentru floare:



Folosind elipse pentru floare:



Folosind elipse pentru Mona Lisa:



**Metoda B:**

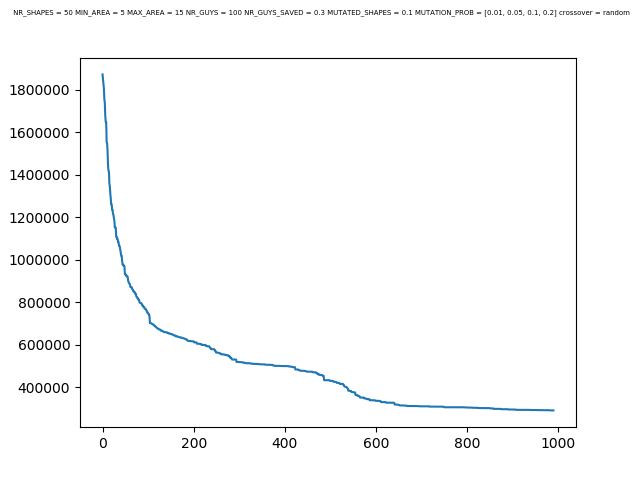
Metoda B are rezultate mult mai bune deoarece functia de fitness tine cont de toate figurile care formeaza imaginea.

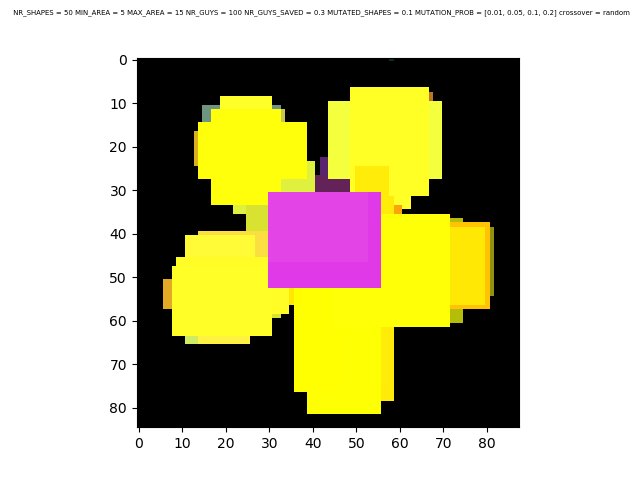
**Folosind dreptunghiuri pentru floare:**

Cel mai bun rezultat a fost obtinut folosind parametrii:

NR\_SHAPES = 50 | MIN\_AREA = 5 |MAX\_AREA = 15 | NR\_GUYS = 100 |NR\_GUYS\_SAVED = 0.3

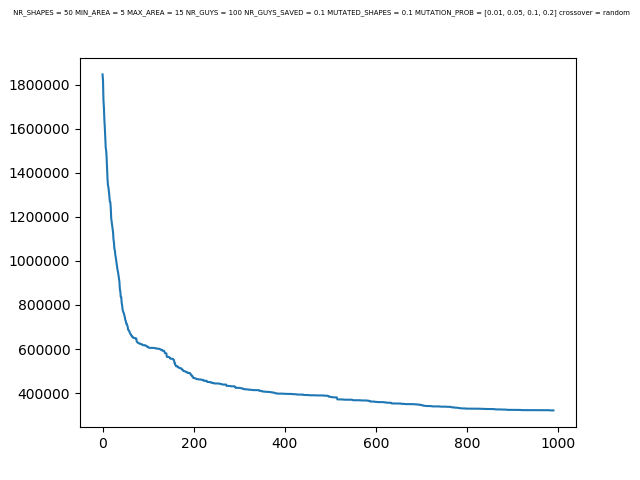
MUTATED\_SHAPES = 0.1 | MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2] | crossover = random

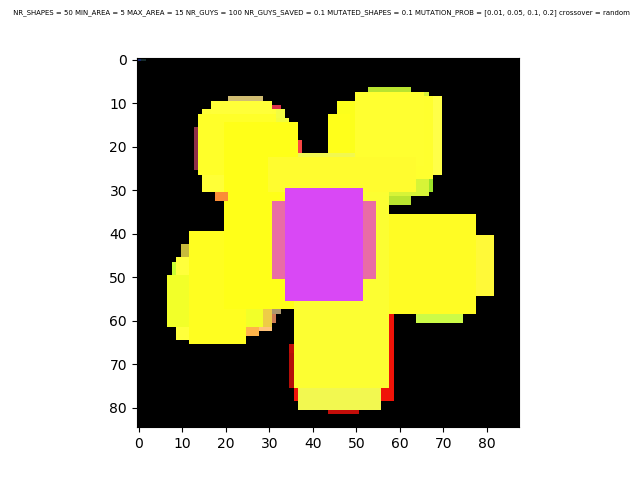




NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 | NR\_GUYS\_SAVED = 0.1

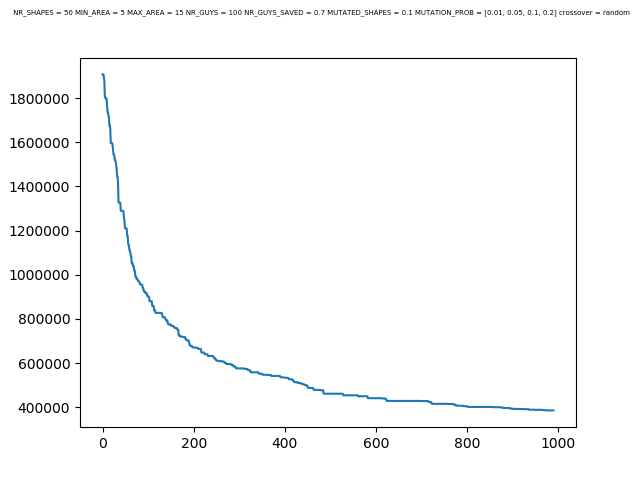
MUTATED\_SHAPES = 0.1 | MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2] | crossover = random

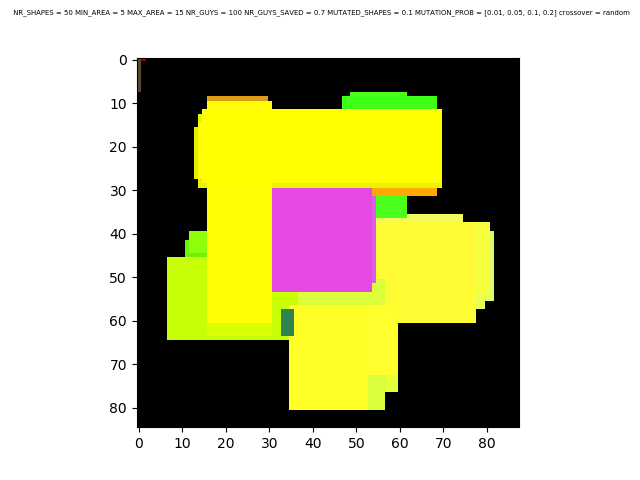




NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 | NR\_GUYS\_SAVED = 0.7

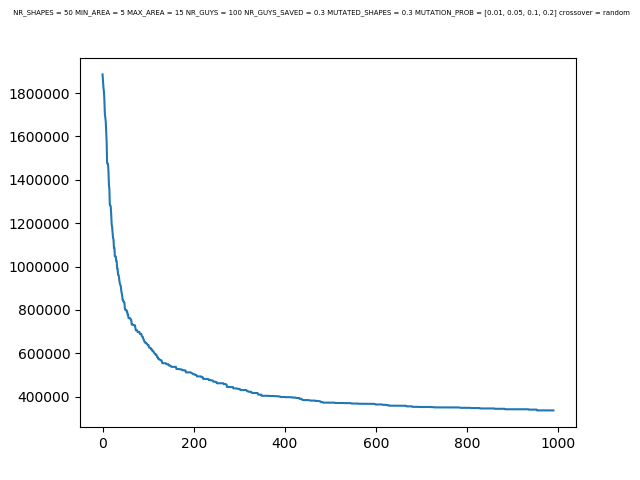
MUTATED\_SHAPES = 0.1 | MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2] | crossover = random

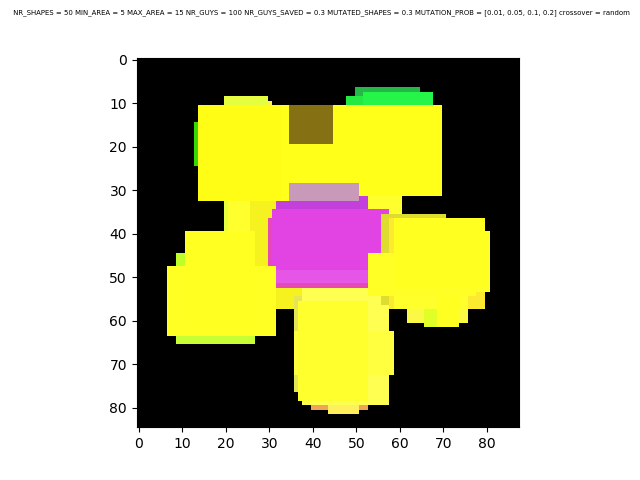




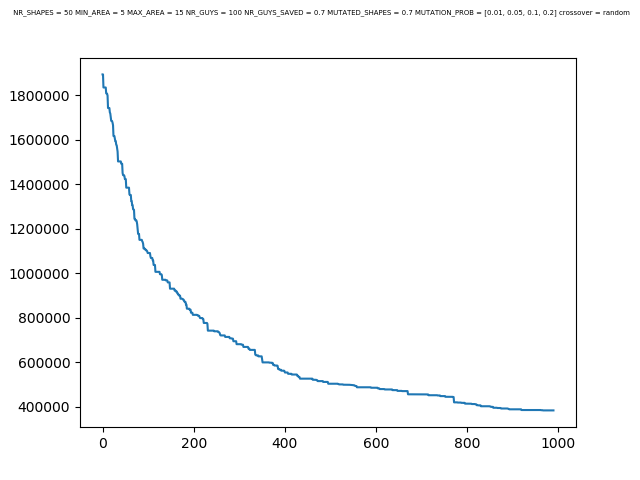
NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 |NR\_GUYS\_SAVED = 0.3

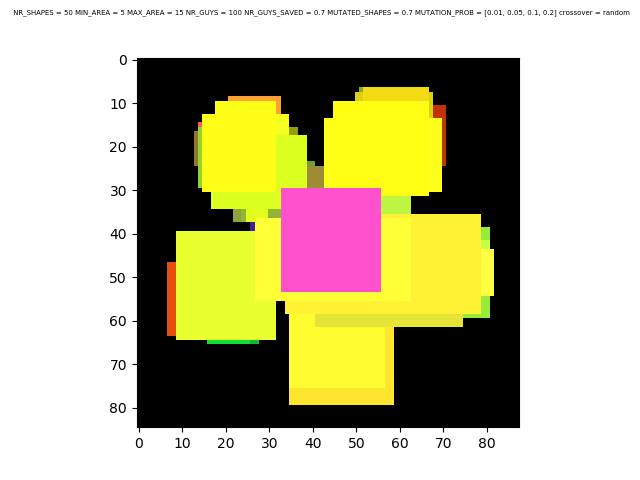
MUTATED\_SHAPES = 0.3 | MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2] | crossover = random



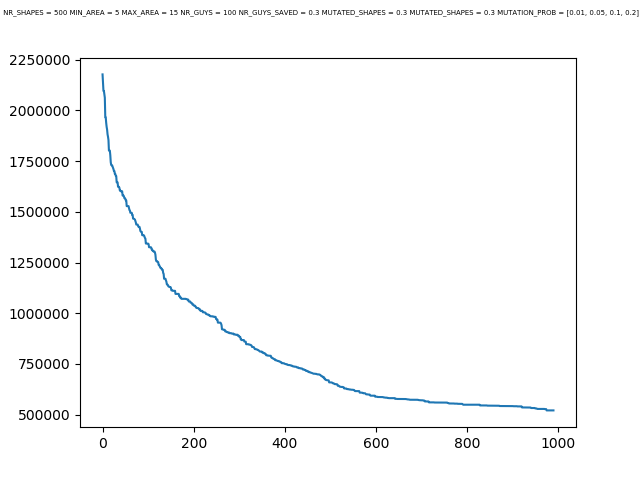


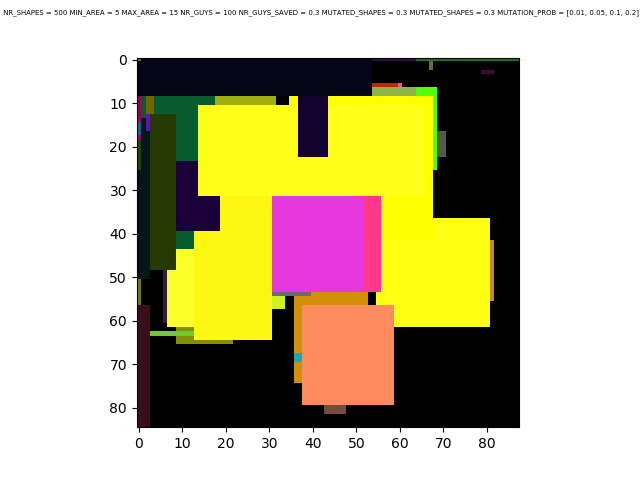
NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 | NR\_GUYS\_SAVED = 0.7 MUTATED\_SHAPES = 0.7 | MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2] | crossover = random



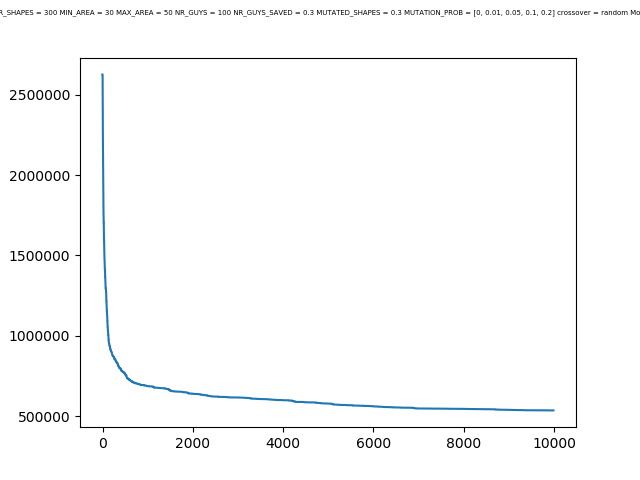


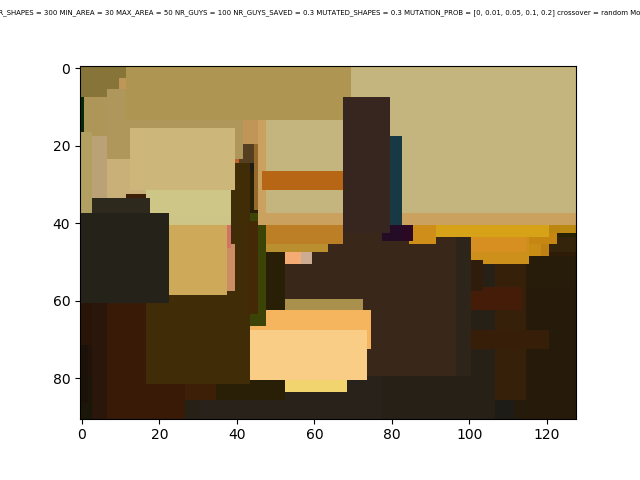
NR\_SHAPES = 500| MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 |NR\_GUYS\_SAVED = 0.3 MUTATED\_SHAPES = 0.3 | MUTATED\_SHAPES = 0.3 |MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2]





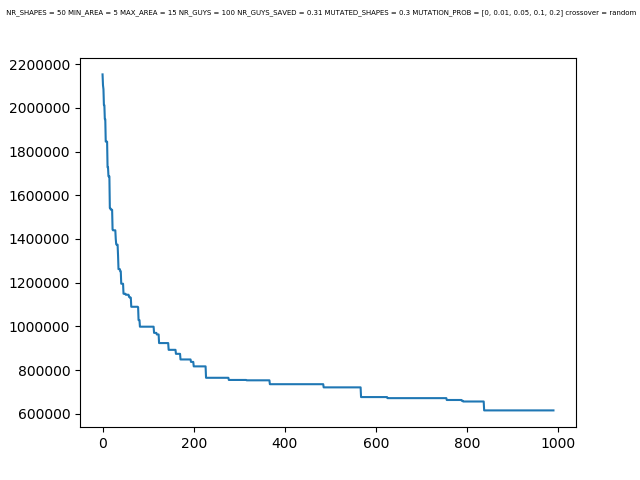
**Folosind dreptunghiuri pentru Mona Lisa:**

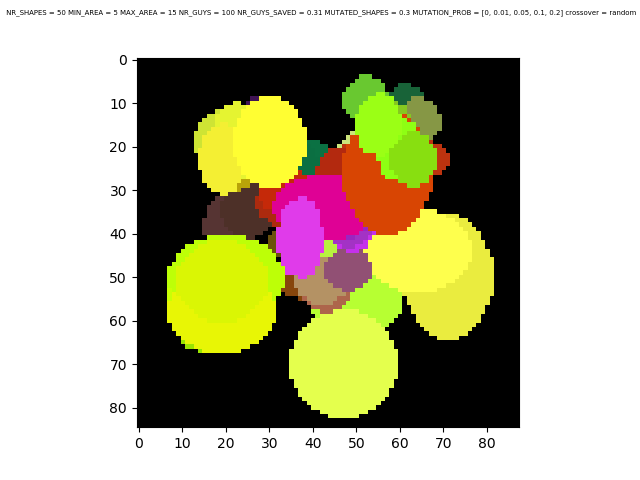
NR\_SHAPES = 300 | MIN\_AREA = 30 |MAX\_AREA = 50 |NR\_GUYS = 100 |NR\_GUYS\_SAVED = 0.3 MUTATED\_SHAPES = 0.3 | MUTATION\_PROB = [0, 0.01, 0.05, 0.1, 0.2] | crossover = random ****

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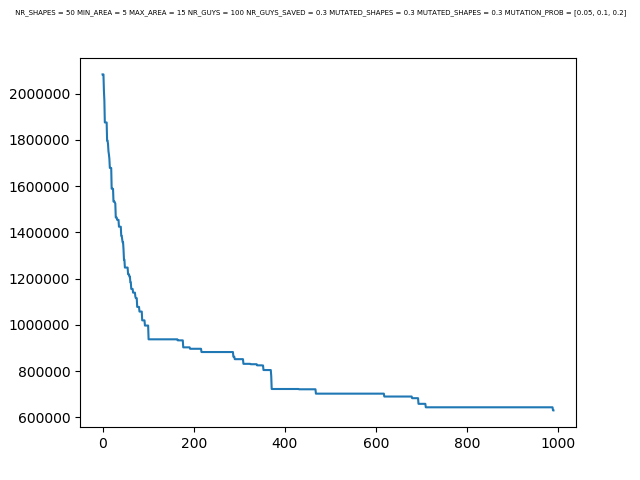
**Folosind dreptunghiuri pentru Mona Lisa:**

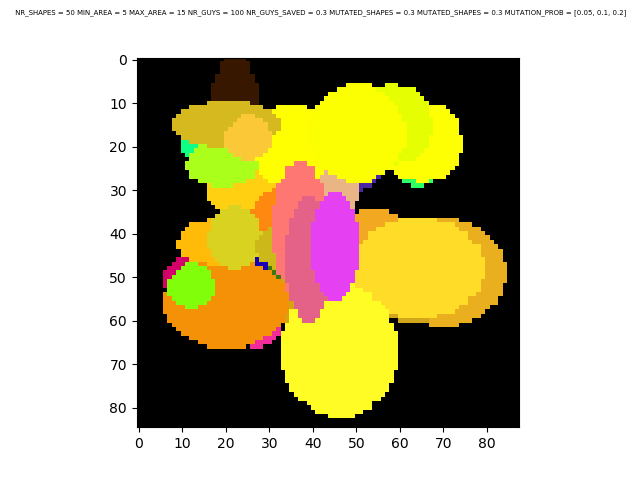
NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 |NR\_GUYS = 100 | NR\_GUYS\_SAVED = 0.31 MUTATED\_SHAPES = 0.3 | MUTATION\_PROB = [0, 0.01, 0.05, 0.1, 0.2] | crossover = random





NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 | NR\_GUYS\_SAVED = 0.3 MUTATED\_SHAPES = 0.3 | MUTATION\_PROB = [0.05, 0.1, 0.2]





NR\_SHAPES = 50 | MIN\_AREA = 5 | MAX\_AREA = 15 | NR\_GUYS = 100 |NR\_GUYS\_SAVED = 0.05 MUTATED\_SHAPES = 0.1 | MUTATION\_PROB = [0.01, 0.05, 0.1, 0.2] | crossover = random