



HUMAN INTERACTED GENETIC ALOGRITHM APPLICATION

{ PENGHUAN NI, RICH MACLIN AND PETER WILLEMSSEN } UNIVERSITY OF MINNESOTA DULUTH



ABSTRACT

By using the human interacted Genetic Algorithm(GA), we expect to have a human preferred solution for urban design problem. Human can select different method for selection, crossover, and mutation operations. When we run the human interacted GA, people can change the fitness value for some of the chromosome based on their preference. By using the feedbacks from the user, we expect to change the direction of GA.

- 1.
- 2.

MATERIALS & METHODS

The following materials were required to complete the research:

- Curabitur pellentesque dignissim
- Eu facilisis est tempus quis
- Duis porta consequat lorem
- Eu facilisis est tempus quis

The following equations were used for statistical analysis:

$$\cos^3 \theta = \frac{1}{4} \cos \theta + \frac{3}{4} \cos 3\theta \quad (1)$$

$$E = mc^2 \quad (2)$$

Phasellus imperdiet, tortor vitae congue bibendum, felis enim sagittis lorem, et volutpat ante orci sagittis mi. Morbi rutrum laoreet semper. Morbi accumsan enim nec tortor consectetur non commodo nisi sollicitudin. Proin sollicitudin. Pellentesque eget orci eros. Fusce ultricies, tellus et pellentesque fringilla, ante massa luctus libero, quis tristique purus urna nec nibh.

REFERENCES

[1] J. M. Smith and A. B. Jones. *Book Title*. Publisher, 7th edition, 2012.

[2] A. B. Jones and J. M. Smith. Article Title. *Journal title*, 13(52):123–456, March 2013.

INTRODUCTION

Aliquam non lacus dolor, a aliquam quam. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nulla in nibh mauris. Donec vel ligula nisi, a lacinia arcu. Sed mi dui, malesuada vel consectetur et, egestas porta nisi. Sed eleifend pharetra dolor, et dapibus est vulputate eu. **Integer faucibus elementum felis vitae fringilla.** In hac habitasse platea dictumst. Duis tristique rutrum nisl, nec vulputate elit porta ut. Donec sodales sollicitudin turpis sed convallis. Etiam mauris ligula, blandit adipiscing condimentum eu, dapibus pellentesque risus.

RESULTS 2

Donec faucibus purus at tortor egestas eu fermentum dolor facilisis. Maecenas tempor dui eu neque fringilla rutrum. Mauris lobortis nisl accumsan.

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 1: Table caption

Nulla ut porttitor enim. Suspendisse venenatis dui eget eros gravida tempor. Mauris feugiat elit et augue placerat ultrices. Morbi accumsan enim nec tortor consectetur non commodo.

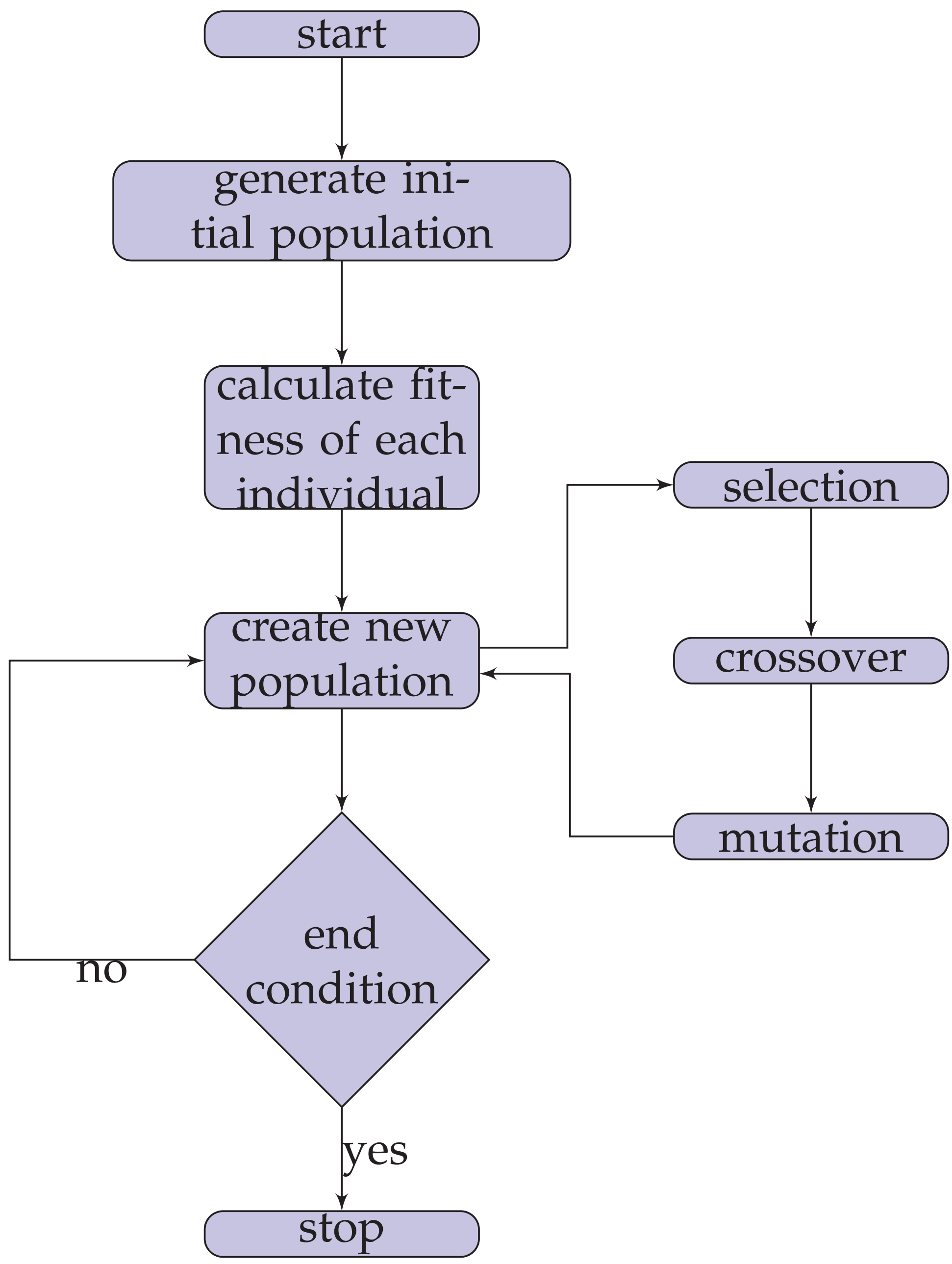
Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 2: Table caption

FUTURE RESEARCH

Integer sed lectus vel mauris euismod suscipit. Praesent a est a est ultricies pellentesque. Donec tincidunt, nunc in feugiat varius, lectus lectus auctor lorem, egestas molestie risus erat ut nibh.

GA EXPLANATION



- User specified parameters: number of variables, possible value of each variable, size of population, number of generations, fitness function, crossover probability, mutation probability, selection type, crossover type, and mutation type.
- Generate new population: generate the first generation of the solution
- Create new population: applying selection, crossover, and mutation to the previous generation, and get a new population, which should improve the solution.
- Encoding method: binary encoding, use binary string to represent each variable
- Selection: selection a pair of parents and do the crossover and mutation operation on them. Support methods are roulette-wheel,
- Crossover: exchange bits of binary string between two parents based on crossover probability and produce two children. Support methods are single-point,
- Mutation: mutate bits of children's binary strings based on mutation probability. Support methods are single-point,

CONCLUSION

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CONTACT INFORMATION

Web www.university.edu/smithlab
Email john@smith.com
Phone +1 (000) 111 1111