

4 PAGES / PÁGINAS

Candidate session number: / Numéro de session du candidat: / Número de convocatoria del alumno:

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Candidate name: / Nom du candidat: / Nombre del alumno:

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At the start of each answer to a question, write the question number in the box using your normal hand writing / Avant de répondre à une question, inscrivez son numéro à la main dans la case appropriée / Al comienzo de cada respuesta, escriba a mano el número de pregunta en la casilla.

Example
Ejemplo

27

2	7
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Example
Ejemplo

3

3

Roulette wheel selection is a selection strategy that randomly selects solutions for the mating pool, whilst giving weighted bias towards fitter individuals.

Truncation selection randomly selects a number of individuals from the population, then chooses that with the highest fitness from each selection to proceed to the following ~~of~~ mating pool.

Both methods allow an element of exploration, which helps to promote diversity and prevent premature convergence. ~~targeting~~ This is done through randomness in the selection of solutions in both algorithms, giving weaker chromosomes the opportunity to proceed.

In RWS, there is a higher level of exploration than truncation, as chromosomes ~~turn~~ roulette wheel spin is entirely random.

In RWS, the selection of solutions is completed using relative fitness weightings, ~~there~~ However, in truncation selection, the initial selection of individuals is entirely random.



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Furthermore, truncation selection is more likely to ~~be~~ replace less fit solutions as their fate is decided immediately after they are selected into a tournament. The ~~unfulfillment~~, therefore, in rewording ~~travelling~~ exploration, is reduced in truncation selection with smaller populations, as fitter individuals are more likely to be selected in most tournaments.

Similarly, RWS would not work well in smaller populations as fitter solutions will take up a larger share of the roulette wheel. This means that both ~~individualistic~~ strategies should generally be used with larger populations in order to achieve adequate diversity.

