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# Comparison of Crossover Types to Obtain Optimal Queries Using Adaptive Genetic Algorithm

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**Abstract :** this study presents an information retrieval system of using genetic algorithm to increase information retrieval efficiency. Using vector space model, information retrieval is based on the similarity measurement between query and documents. Documents with high similarity to query are judge more relevant to the query and should be retrieved first. Using genetic algorithms, each query is represented by a chromosome; these chromosomes are fed into genetic operator process: selection, crossover, and mutation until an optimized query chromosome is obtained for document retrieval. Results show that information retrieval with adaptive crossover probability and single point type crossover and roulette wheel as selection type give the highest recall. The proposed approach is verified using (242) proceedings abstracts collected from the Saudi Arabian national conference.

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