

RFreak—An R Package for Evolutionary Computation

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Abstract. Evolutionary computation (EC) is a well established random search heuristic in computer science. Its usefulness for computational statistics is backed up by an increasing number of works successfully considering EC approaches for statistical problems. The application of random search heuristics like EC is necessary for problems that are very hard to compute exactly and often EC turns out to be the most promising search heuristic. The basic layout of EC algorithms is very similar which allows the construction of these algorithm in a modular framework.

RFreak is an R package intended to ease the construction and application of EC algorithms by utilizing the modularity of EC algorithms. It serves this purpose by providing a framework enwrapping the functionality of the free evolutionary algorithm kit (FrEAK), which is written in Java. Thus, RFreak offers an easy way to do EC in R.

The easy-to-use framework RFreak further increases the usefulness of EC for computational statistics, which already gained considerable importance.