

SFO is based on population based metaheuristic algorithm inspired by the behaviour of sunflowers. Sunflowers are known to track the sun throughout the day, and the SFO algorithm uses this behaviour to search for optimal solutions to optimization problems.

The SFO algorithm works by first initializing a population of sunflowers. Each sunflower is represented by a point in a search space, and each point has a fitness value that represents how good a solution it is. The sunflowers then move towards the sun, which is represented by the best solution in the population. As the sunflowers move, they also pollinate each other, which helps to share information and improve the quality of the solutions.

The SFO algorithm is a relatively new algorithm, but it has been shown to be effective for solving a variety of optimization problems. It is particularly well-suited for problems that have multiple local optima, as the pollination process helps to prevent the algorithm from getting stuck in a local optimum.

## Advantages of SFO:

- 1) It is a population based algorithm, which means that it can search for solutions in a more robust way than single-solution algorithms.
- 2) It is relatively easy to implement
- 3) It has been shown to be effective for solving a variety of optimization problems.

## Disadvantages of SFO:

- 1) It can be computationally expensive to run.
- 2) It may not be as effective as other meta-heuristic algorithms for certain type of problems.

The SFO is a promising new metaheuristic algo that can be used to solve a variety of optimization problems. It is relatively easy to implement and has been shown to be effective in practice.