

Improving Local Search: Tabu Search vs Simulated Annealing

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Local search is a heuristic method for solving computationally hard optimization problems. Local search can be used on problems that can be formulated as finding a solution maximizing a criterion among a number of candidate solutions. Local search algorithms move from solution to solution in the space of candidate solutions (the search space) by applying local changes and is therefore prone to get stuck at a local optima. In order to avoid this, various techniques are used. Two such techniques which we'll discuss in this seminar are Tabu search and Simulated annealing. Both these methods involve "making a wrong choice" in order to escape local optima. In this seminar, we will explore this algorithm, advantages, and improvements over local search so that we can draw a comparison between the two.