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To tackle complex real-world problems, scientists have been looking into natural processes and creatures - both as model and metaphor - for years. **Optimization** is at the heart of many natural processes including Darwinian evolution, social group behavior and foraging strategies. Over the last few decades, there has been remarkable growth in the field of nature-inspired search and optimization algorithms. Currently these techniques are applied to a variety of problems, ranging from scientific research to industry and commerce. The two main families of algorithms that primarily constitute this field today are the **evolutionary computing** methods and the **swarm intelligence** algorithms. Although both families of algorithms are generally dedicated towards solving search and optimization problems, they are certainly not equivalent, and each has its own distinguishing features. Reinforcing each other’s performance makes powerful hybrid algorithms capable of solving many intractable search and optimization problems.

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