Many biological systems can be viewed as algorithms designed by evolution to solve computational problems critical for survival. I will present two such examples. First, I will describe how the olfactory circuit in the fruit fly brain uses a variant of a traditional computer science algorithm (called locality-sensitive hashing) to perform efficient similarity searches. Second, I will describe how plant architectures trade-off between common network design principles — minimizing transport distances vs minimizing costs in building infrastructure — using the theory of Pareto optimality. I will describe how discovering the strategies biological systems have evolved to solve problems can lead to new algorithms and new insights into biological function.