# Requirements and Properties

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### 0.1 Learned in this study

### 0.2 Things to explore

## 1 Overview

- Computation/Processing
- Memory
  - Storage
    - Compression
  - Retrieval

## 2 Things it should do

- Improve algorithms
  - Receive an existing algorithm and be able to determine its purpose. With that in mind, optimize the algorithm so it is maximally efficient in both time and space
  - Learn which data structure is the most appropriate for a problem
    - Inspect code and be able to figure out if the current data structure is the best one for its current use
- Improve data structures

## 3 Important properties

- Signal filtering (ignore non-essential data to reduce the domain size)
- Abstraction/simplification/class generation. Learn to group similar stimuli so that you do not have to learn about each of them individually.
- It should be constructive: modifying or adding new features should not require that its database be flushed/reset.