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3-1 Programming Journal

A linked-list data structure is an incredible form of grouping data into a list that can be called upon and edited very quickly. A linked-list allows for a new entry to be inserted anywhere, without shifting the whole entire list, by allocating random slots in memory, as opposed to a vector or an array which allocates a section of memory. One downside to a linked-list is that there is no function to directly access an element within the list. A singly-linked list can not be traversed backwards (from the last element to the first), but a doubly-linked list can.

Search algorithms are an incredible means of finding specific items in a data set. I don’t believe they are tired to what they are searching, but I do believe that some may have to be adapted to fit other scenarios. As a basic example; if an algorithm is good for searching for strings ending in “ing”, it may also be fitted to search a list of names for last name “Smith”. The latter ends up being, in my opinion, the very basic idea of a search engine. Now instead of just returning every site and every page that says the word “Smith”, a search engine has a complicated and serious algorithm beyond my current comprehension of software that will show the most relevant sites that will give me information on “Smith”