CSE2221

Greedy Algorithm <https://youtu.be/ARvQcqJ_-NY>

●Activity Selection Problem: <https://youtu.be/32uOuOPXBhc>

Brute Force Algorithm: <https://youtu.be/DKCbsiDBN6c>

● All Possible Subset <https://youtu.be/u0e29JIdxZU> <https://www.geeksforgeeks.org/backtracking-to-find-all-subsets/>

● Meet in the Middle <https://www.geeksforgeeks.org/meet-in-the-middle/>

Sorting Algorithm <https://youtube.com/playlist?list=PLaCHZCbQhCNpuDMrFyNqXkTew7me2jcNF>

● Merge Sort <https://youtu.be/mB5HXBb_HY8> <https://www.geeksforgeeks.org/merge-sort/>

● Heap Sort <https://youtu.be/HqPJF2L5h9U>

<https://youtu.be/2DmK_H7IdTo> <https://www.geeksforgeeks.org/heap-sort/>

● Quick Sort

● Bubble Sort

● Selection Sort

● Insertion Sort

Graph Theory

●Different Types of Graph Representation <https://youtu.be/1n5XPFcvxds>

● Implicit Graph <https://en.wikipedia.org/wiki/Implicit_graph#:~:text=In%20the%20study%20of%20graph,for%20example%20a%20computable%20function>.

● Minimum Weight in a Path using Binary Search <https://youtu.be/xrozg2SQpVA>

● DFS (Flood Fill Problem in 2D Grid) <https://www.geeksforgeeks.org/flood-fill-algorithm-implement-fill-paint/> <https://youtu.be/b6Ww-JyXUUY>

● BFS <https://youtu.be/pcKY4hjDrxk>

● Topological Sort <https://youtu.be/dis_c84ejhQ> <https://youtu.be/Q9PIxaNGnig> <https://www.geeksforgeeks.org/topological-sorting/>

● Dijkstra <https://youtu.be/XB4MIexjvY0> <https://www.geeksforgeeks.org/dijkstras-shortest-path-algorithm-greedy-algo-7/>

● Disjoint Set Union (DSU) - Finding Cycle in a Graph <https://youtu.be/0JE7hxr8c5c>

Dynamic Programming: <https://youtube.com/playlist?list=PLJULIlvhz0rE83NKhnq7acXYIeA0o1dXb>

<https://www.geeksforgeeks.org/dynamic-programming/> <https://youtu.be/lVR2u9lsxl8>

● Subset Sum <https://youtu.be/kyLxTdsT8ws>

● Fibonacci <https://youtu.be/5dRGRueKU3M>

● Rock Climbing <https://youtu.be/P2_hZJl7HGw>

● Knapsack <https://youtu.be/nLmhmB6NzcM> <https://youtu.be/PfkBS9qIMRE>

● Coin Change <https://youtu.be/L27_JpN6Z1Q> <https://youtu.be/J2eoCvk59Rc>

Searching Algorithm <https://www.geeksforgeeks.org/searching-algorithms/>

● Linear Search <https://youtu.be/4GPdGsB3OSc> <https://youtu.be/C46QfTjVCNU>

● Binary Search <https://youtu.be/V_T5NuccwRA> <https://youtu.be/p9FZlPxukVI>

String Algorithm

● KMP <https://youtu.be/V5-7GzOfADQ>

● Robin Karp <https://youtu.be/qQ8vS2btsxI>

Computational Geometry <https://youtu.be/8zIigKBbgkw>

● Jarvis March gift wrapping

● Graham Scan (Presentation Pending)

Advanced-Data Structure

● Segment Tree <https://youtube.com/playlist?list=PL2q4fbVm1Ik6v2-emg_JGcC9v2v2YTbvq>

● Lazy Propagation <https://youtu.be/UKH4Zgfa4kI> <https://youtu.be/Uyue53xZf-w> <https://www.geeksforgeeks.org/lazy-propagation-in-segment-tree/>

Backtracking

● Maze Solve <https://youtu.be/gBC_Fd8EE8A>

● N Queen Problem <https://youtu.be/xFv_Hl4B83A>

Cumulative Sum

● Range Queries