#### **Git and GitHub**

- 1. About Git GitHub Docs
- 2. Git Book
- 3. Fork a Repo GitHub Docs
- 4. The Linux Command Line | Ubuntu

#### **C** Basics

- 1. Functions in C
- 2. Structures in C
- 3. Pointers in C
- 4. Void Pointers
- 5. Function Pointers in C and C++

**Function Pointers** 

## GDB and Valgrind

- 1. GDB/Valgrind Tutorial 1
- 2. GDB/Valgrind Tutorial 2

## **Linked Lists & Complexity Analysis**

- 1. Linked List (Single, Doubly)
- 2. <u>Big-O Notation Explained with Examples</u>
- 3. Big-O Algorithm Complexity Cheat Sheet

# **Binary Search Trees & Binary Heaps**

- 1. Binary Search Trees, AVL Trees
- 2. Tree Traversals
- 3. VisuAlgo Binary Heap (Priority Queue)

## **Hash Tables & Graphs**

- 1. Associative Array
- 2. Hash Table Wikipedia
- 3. <u>Hash Table (Open Addressing: Linear Probing, Quadratic Probing, Double Hashing and Closed Addressing: Separate Chaining)</u>
- 4. Graph (abstract data type) Wikipedia
- 5. Graph Data Structures (Adjacency Matrix, Adjacency List, Edge List)
- 6. Depth-first search Wikipedia
- 7. Breadth-first search Wikipedia
- 8. Dijkstra's algorithm Wikipedia
- Single-Source Shortest Paths (Bellman Ford's, Dijkstra's/+ve Weighted, BFS/Unweighted, DFS/Tree, Dynamic Programming/DAG)