



Fundamental of Analytics

Duration- 2 Months

Introduction to Data Structure and Algorithm:

- Use of Big O and Small o notations,
- Use of Big Omega and small omega notations.
- Efficiency of algorithms.
- Analysis of recursive programs.
- Solving recurrence equation
- Implementation of Abstract Data Types(ADT)
- List,
- Stack
- Queue
- Hashing

Tree Structure

- Binary trees
- AVL trees
- B and B+ trees
- Red-Black Trees
- Heap
- Tree-Traversal Algorithms
- Graphs and algorithms
- Prim's and Kruskal's algorithms
- Dijkstra's method
- Backtracking
- Minimum spanning trees
- Sorting and Searching Algorithms

Introduction to Data modeling

- Conceptual, Logical and physical modeling
- Top down and Bottom Up modeling
- ER Modeling with different methodologies
- Generic data modeling,
- Semantic data modeling
- Data modeling with different techniques (finite state machine, UML, state charts, Markov Chain, Decision table and decision tree)

Data Dictionary