Mindluster Platform

About the course Graph data Structure

Graph data Structure, in this course you'll dive into the fundamentals of graph data structures, essential for representing relationships between elements in a structured way. Learn about nodes, edges, and the different types of graphs, including directed, undirected, weighted, and unweighted. We'll explore various representation techniques like adjacency lists and matrices, and master essential operations such as adding/removing nodes or edges. You'll also discover powerful traversal algorithms like Breadth-First Search (BFS) and Depth-First Search (DFS) and learn to solve real-world problems like finding shortest paths using Dijkstraâ€™s algorithm. With hands-on coding exercises, this course equips you to implement and optimize graph structures for applications in networking, data science, AI, and more. Whether you're a beginner or looking to expand your programming skills, this course provides a solid foundation in graph theory and practical implementation.

Computer Science Category's Courses

Course Lesson(22)

Lesson 1 : **Array Variables Introduction**

Lesson 2 : **Array Variables Linear Search VB NET Implementation**

Lesson 3 : **Array Variables â€“ Two Dimensional Arrays VB NET Implementation**

Lesson 4 : **Stack Data Structure Algorithm**

Lesson 5 : **Stack Data Structure VB NET Implementation**

Lesson 6 : **Queue Data Structure â€“ Algorithms**

Lesson 7 : **Linked List Data Structure 1 Representation and Traversal algorithms and pseudocode**

Lesson 8 : **Linked List Data Structure 2 Remove Items from a Linked List algorithm and pseudocode**

Lesson 9 : **Linked List Data Structure 3 Building a Linked List algorithm and pseudocode**

Lesson 10 : **Linked List Data Structure 4 VB NET Implementation**

Lesson 11 : **Hash Tables and Hash Functions**

Lesson 12 : **Binary Tree 1 Constructing a tree algorithm and pseudocode**

Lesson 13 : **Binary Tree 2 VB NET procedural code to construct and search a tree**

Lesson 14 : **Binary Tree 3 Traverse algorithms pseudocode and VB NET code**

Lesson 15 : **Binary Tree 4 Object Oriented Implementation in VB NET**

Lesson 16 : **Graph Data Structure 1 Terminology and Representation algorithms**

Lesson 17 : **Graph Data Structure 2 Implementation in VB NET**

Lesson 18 : **Graph Data Structure 3 Traversing a Graph algorithms**

Lesson 19 : **Graph Data Structure 4 Dijkstra s Shortest Path Algorithm**

Lesson 20 : **Graph Data Structure 5 Dijkstra s Shortest Path Implementation in VB NET**

Lesson 21 : **Graph Data Structure 6 The A Pathfinding Algorithm**

Lesson 22 : **Graph Data Structure 7 A Pathfinding VB NET Implementation**

Related courses

Linear Algebra for Computer Scientists

Insertion Sort

Bubble Sort

GCSE Computer Science

Random Access Memory

Binary Trees

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