A **graph data structure** is a collection of nodes connected by edges, used to represent relationships between different entities. [Graph algorithms manipulate and analyze graphs, solving problems like finding the shortest path or detecting cycles1](https://www.geeksforgeeks.org/graph-data-structure-and-algorithms/).

Here are **five free reference links** where you can learn more about graph data structures and algorithms:

1. [**GeeksforGeeks**: Provides comprehensive tutorials on graph data structures, algorithms, and related topics1](https://www.geeksforgeeks.org/graph-data-structure-and-algorithms/)
2. [**Udemy**: Offers a free course titled “Data Structures: An Illustrative Introduction” that covers various data structures, including graphs](https://www.geeksforgeeks.org/graph-data-structure-and-algorithms/)[2](https://www.udemy.com/course/data-structures-an-illustrative-introduction/)
3. **VisuAlgo**: A visual tool created by Dr. [Steven Halim to help understand data structures and algorithms, including graphs](https://www.geeksforgeeks.org/graph-data-structure-and-algorithms/)[3](https://visualgo.net/en)
4. [**Programiz**: Provides tutorials on graph data structures, different representations, and related concepts](https://www.geeksforgeeks.org/graph-data-structure-and-algorithms/)[4](https://www.programiz.com/dsa/graph)
5. [**Data Structure and Algorithm Tutorials**: A concise introduction to graphs, their components, and representations](https://www.geeksforgeeks.org/graph-data-structure-and-algorithms/)[5](https://www.geeksforgeeks.org/introduction-to-graphs-data-structure-and-algorithm-tutorials/)

Feel free to explore these resources to enhance your understanding of graph data structures! 📚🔗