Resumo do Vídeo

1. A graph is a nonlinear aggregation of nodes and edges. There are two types of graphs we're going to discuss. Undirected and directed.

2. There are two popular ways to represent a graph. One is an adjacency matrix, and the other is a list. With an matrix, we could create a 2D array, one row, and one column for each node. With a list, we would find the index of the node we're beginning at.

3. The space complexity to store a matrix is big O of V squared. Since we have five nodes and five columns, we would have a total of 25 spaces. The benefits of a matrix are that it's very quick to look up an edge.

4. An adjacency list is an array, or array list, of linked lists. Each element is a separate linked list. And each header within the linked list would contain the address of a node. Even if there's a node that is not adjacent to any neighbors, we would still want to add it to the list.

5. A graph can be used to model a network. Each node is a piece of data within our network and an edge connects nodes. The space complexity of an adjacency list is big O of V plus E. V for the number of vertices, aka nodes, and E for thenumber of edges.