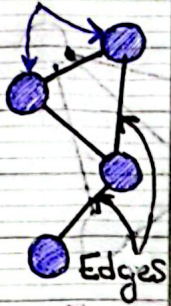


Vertices



Introduction

→ Graph Theory

• The study of graphs - mathematical structures used to model pairwise relationship between objects.

↳ **Vertices (nodes / points)** : entities in the network

↳ **Edges (links / lines)** : connections between entities

→ Social Network Analysis (SNA)

- A collection of techniques, tools, and methods to map and measure relationships among people and organizations
- Focuses on interaction rather than individual behavior
- Makes hidden relationships visible and analyzable

→ PageRank Algorithm

- Algorithm used by Google Search to rank web pages in search results
- Counts number and quality of links to a page
- Assume that more important websites receive more links from other websites

→ Knowledge Graphs

- while Social Networks show "who knows who" Knowledge Graphs show "who knows what"
- Used to store interlinked descriptions of entities (objects, events, situations ...) with free-form semantics