



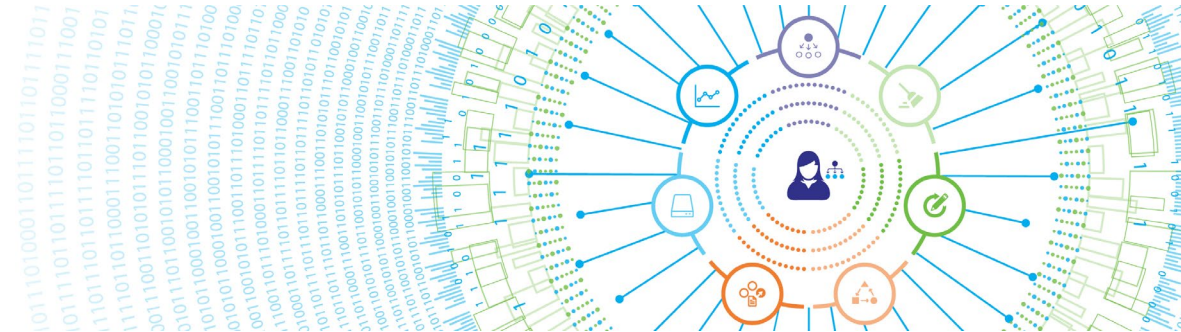
Knowledge Graph





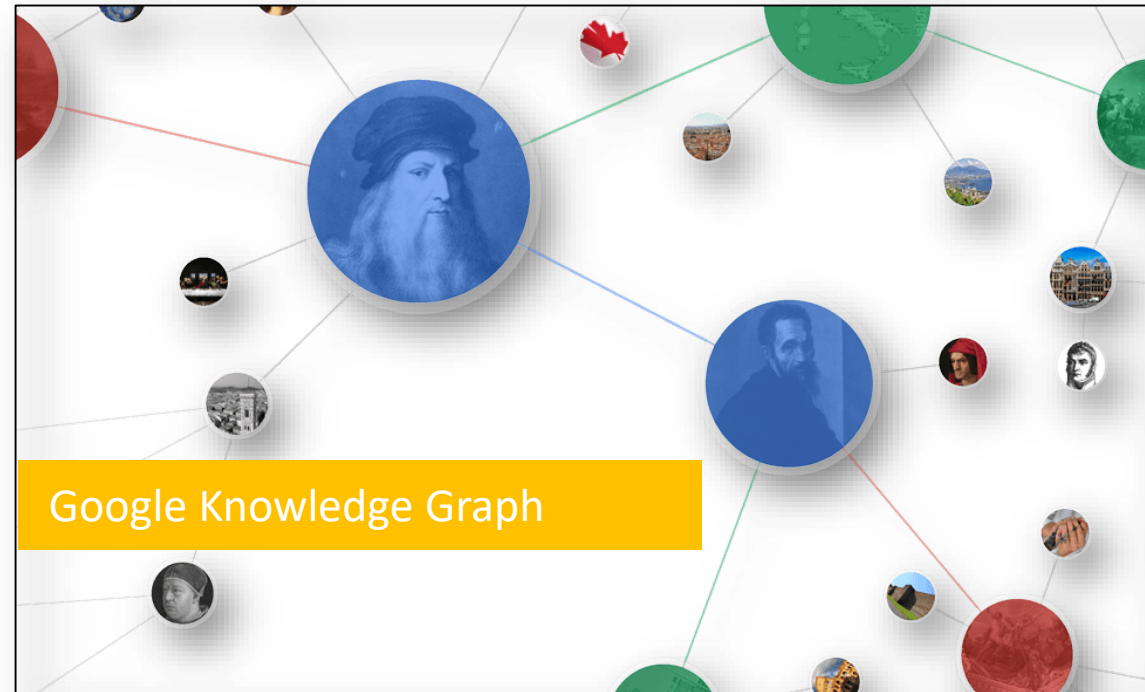
Content

- «The» Knowledge Graph
- In general



Content

- «The» Knowledge Graph
- In general





«The» Knowledge Graph

Google Knowledge Graph

The *Knowledge Graph* is a knowledge base used by Google and its services to enhance its search engine's results with information gathered from a variety of sources.

Main sources: Wikidata and Wikipedia

Information is presented in an infobox

knowledge graph

About 429'000'000 results (0.49 seconds)

The **Knowledge Graph** is a **knowledge** base used by Google and its services to enhance its search engine's results with information gathered from a variety of sources.

en.wikipedia.org › wiki › Knowledge_Graph
[Knowledge Graph - Wikipedia](#)

People also ask

- How does a knowledge graph work?
- How do you make a knowledge graph?
- Why is knowledge graph important?
- What is Knowledge Graph in SEO?

developers.google.com › knowledge-graph
[Google Knowledge Graph Search API | Google Developers](#)

Nov 15, 2019 - Some examples of how you can use the **Knowledge Graph** Search API include:
 Getting a ranked list of the most notable entities that match certain ...

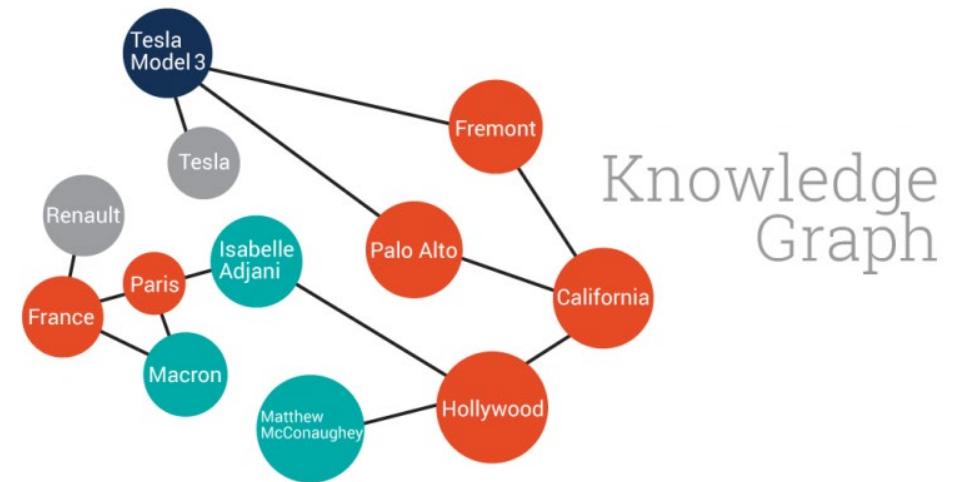
Knowledge Graph

The Knowledge Graph is a knowledge base used by Google and its services to enhance its search engine's results with information gathered from a variety of sources. The information is presented to users in an infobox next to the search results. [Wikipedia](#)



Content

- «The» Knowledge Graph
- In general



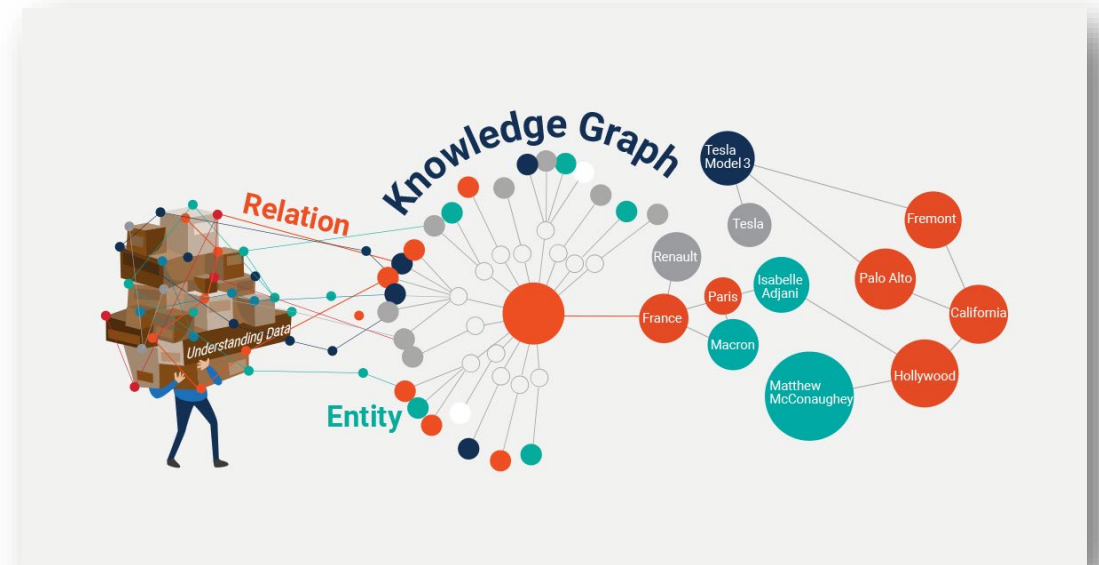


In general

Knowledge Graph

Knowledge graphs combine characteristics of several data management paradigms and can be understood as a:

- **Database**
because the data can be queried via structured queries
- **Graph**
because it can be analyzed as any other network data structure
- **Knowledge base**
because the data in it bears formal semantics, which can be used to interpret the data and infer new facts.



A knowledge graph acquires and integrates information into an ontology and applies a reasoner to derive new knowledge.

(Lisa Ehrlinger and Wolfram Wöß – University of Linz in Austria)



In general

Purpose of a Knowledge Graph

A knowledge graph is not only a set of datapoints linked by relations that describes a domain, for instance a business, an organization, or a field of study, but also allows to describe new relations using data science.

Graph Data Science Algorithms

A subset of data science algorithms that come from network science,
Graph Algorithms enable reasoning about **network structure**



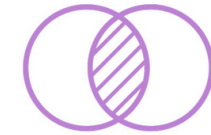
Community Detection

Detects group clustering or partition options



Centrality (Importance)

Determines the importance of distinct nodes in the network



Similarity

Evaluates how alike nodes are



Heuristic Link Prediction

Estimates the likelihood of nodes forming a relationship



Pathfinding & Search

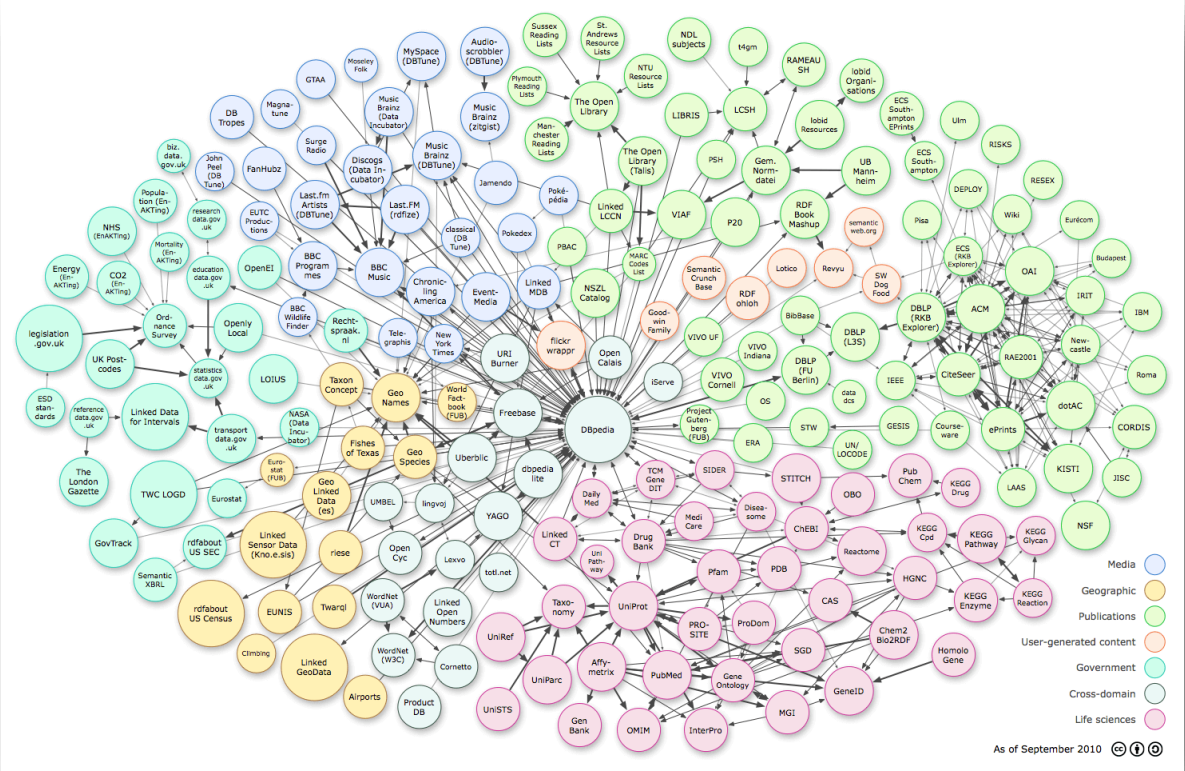
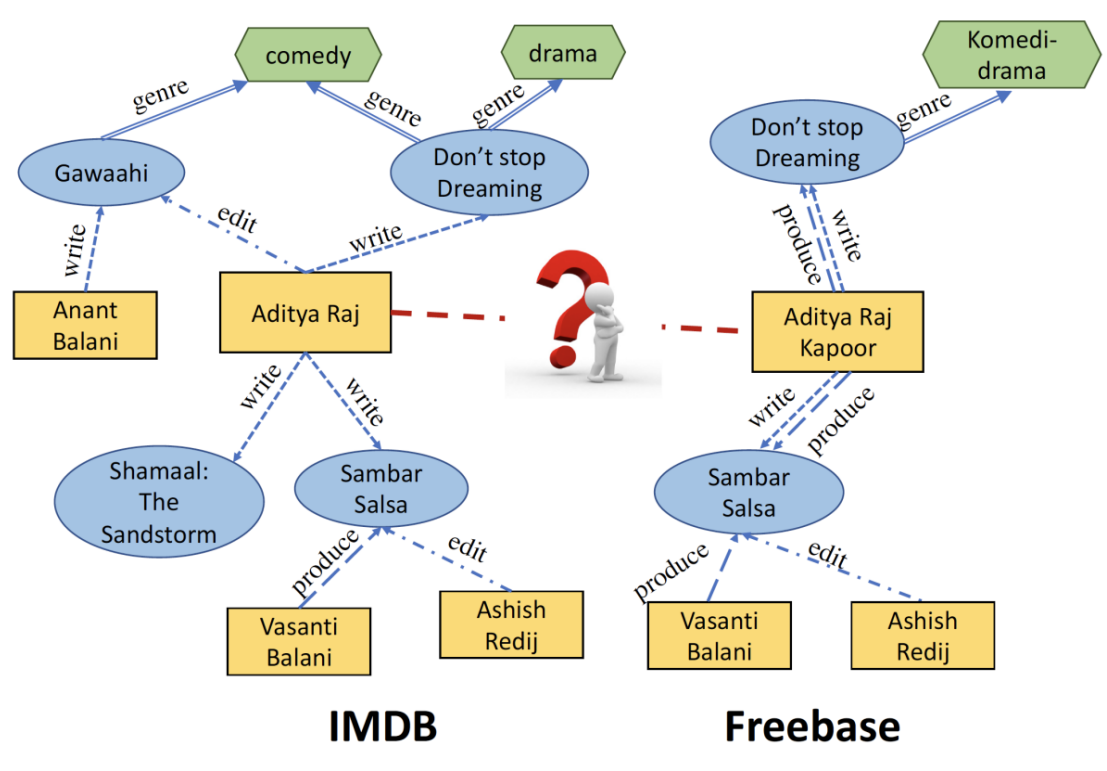
Finds optimal paths; evaluates route availability, quality



In general

Combining Knowledge Graphs

There is high potential and power in combining knowledge graphs to an even bigger knowledge graph.





In general

Grakn.ai

