Interacting with Knowledge Graphs

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Topic

Knowledge graphs represent data using nodes and edges. Any object, person, movie, or year can be a node. Edges define relationships between nodes. For instance, J. Lawrence acted in a movie that was released in 2021, where L. DiCaprio also acted.

Currently, large companies like Google, Amazon, Facebook, Microsoft, Bosch and Siemens use knowledge graphs for multiple purposes: improving search capabilities, providing user recommendations, enhancing targeted advertising, empowering business analytics, connecting users, amongst (many) others [1].

There are many ways to interact with knowledge graphs. This seminar covers research on topics such as query building, finding relatedness or data exploration:

- **Querying**: Get all actors that acted with L. DiCaprio before 2020. Answer: B. Pitt.
- **Find relatedness**: What do movies like Don’t look up and Licorice Pizza have in common? Answer: both were released in 2021.
- **Explore the graph**: Follow edges with label “acted in” starting with L. DiCaprio to find other actors. Answers: J. Lawrence and B. Pitt.


Target Students

The proseminar is intended for those who want to know, design, and develop human interactions with complex knowledge structures. Although no prior experience with knowledge graphs is required, familiarity with databases is a plus.

Procedure

After an introduction to the topic, participants will write a technical report, which will be peer-reviewed by other participants. This will be followed by a presentation of their report.

ARE YOU INTERESTED?
(for any queries, send us an email)

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