We propose the meta structure, which expresses complex relationships. We design 3 relevance measures based on meta structures.

Structure-based Relevance

StructCount: no. of meta structure instances.
SCSE: prob. of a “successful” subgraph expansion.
BSCE: StructCount + SCSE.

Advantages:
- More expressive and flexible than meta path.
- Support more complex relationships.

Our Main Contribution

Meta Structure: an extension of meta path.

Relevance Computing on HIN

Meta Path [1]: a sequence of node types and edge types.

Meta Path Instance: a path of HIN conforming to the pattern.

Relevance Measures:
- PathCount [1]: the number of meta path instances.
- PathSim [1]: a normalized version of PathCount.
- PCRW [2]: the probability of the random walk.

References


Efficiency

i-LTable: a lookup table for storing the search results of a given meta structure at the i-th layer.