

EINLADUNG

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Titel: Adaptable Transformation-Based Similarity Search
in Multimedia Databases

Abstract:

Ways of making data accessible to its consumers - be they humans or algorithms - are crucial for turning ever-growing data dumps into data mines.

Of particular importance to the user are access methods that allow for query-based searching of databases. However, for vast collections of complex data objects such as digital image libraries and music databases, querying methods that necessitate an accurate, algebraic description of what the user is looking for cannot cover all search needs. For instance, a prototypical object might be known to the user and yet he or she may be unable to describe which qualities make the object prototypical. Similarity search systems based on the query-by-example paradigm can help the user in such situations by retrieving objects from the database that exhibit a high degree of similarity to the prototypical query object. For this purpose, the system must decide algorithmically which objects are to be deemed as similar to each other.

This talk addresses techniques regarding the efficiency, effectiveness, and applicability of a particularly intuitive and flexible class of distance measures where the distance (i.e., dissimilarity) between two objects is modeled as the minimum amount of work that is required for transforming the feature representation of one object into the feature representation of the other. As the cost of transforming a feature into another can be chosen depending on the features at hand, these transformation-based distance measures are highly adaptable and do not assume that the underlying features are perceptually independent.

Es laden ein: Die Dozenten der Informatik