



Kolloquium zur Bachelorarbeit

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Development of a New Censor for a Probabilistic Database

Nowadays a lot of uncertain data is produced in various areas. Traditionally, data is stored in relational databases. However, the concept of relational databases is limited to representing facts. This makes them unsuitable to represent ambiguous or uncertain data. That kind of data is best modeled with probabilistic databases. In probabilistic databases the values of some attributes are only known with a probability. This special property can also be used to protect sensitive data. The protection of data that is not meant for the public can be achieved through redistribution of probabilities in a way that the sensitive data can neither be found directly nor indirectly through implications that can be deduced from other data. That does not mean the value of an attribute that is to be protected should not appear in any query result, but its probability should be low enough to be considered irrelevant. This thesis is about an approach to do that probability redistribution. For that a censor was designed that handles the redistribution. That Censor utilizes a proxy that intercepts query results returned by the database to manipulate them before returning them to the user. Of course, it is not desirable that the user notices the data manipulation. That means the time between the user issuing a query and getting his result must be kept reasonable and the results must be consistent. The latter meaning that results that were returned previously must stay at the probabilities they were returned with for every following query, which is ensured utilizing a log storing that information.

Freitag, den 19. Oktober. 2018, 10:30 Uhr,
Besprechungsraum 106, IfI (D3), Julius-Albert-Str. 4.