

EINLADUNG

Zeit: Dienstag, 15.09.09, 16:30 Uhr

Ort: Seminarraum 5056, Ahornstr. 55

Referent: Frau Prof. Dr. Myra Spiliopoulou
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Titel: Multi-Table Stream Mining

Abstract:

The multi-relational data mining paradigm deals with the challenge of model learning over a set of correlated database tables. This paradigm is intended for static datasets though, while many modern applications require the analysis of streams. It is obvious that customer transactions in an e-shop constitute a stream; there are mature methods for mining such a stream in isolation. However, the customers themselves constitute another stream that brings new objects whenever an individual becomes a customer. The products build a further, slower stream from which objects are forgotten when they are no longer offered for sale. Learning a model over such a “multi-table stream” implies solving problems that do not occur in the static scenario. In this talk, we will see solutions to these problems.

The methods we discuss deal with (a) the management of the correlated streams and their transformation into a single stream for mining and (b) the impact of growing objects upon the model. The first issue involves synchronizing streams that reference each other and arrive at different speeds, judiciously forgetting objects that reference each other, and dealing with changes in the valuerange of the attributes. The second issue involves monitoring how an object “grows” as other objects reference it, and then deciding which objects to involve in model learning – depending, among others on object size. We report on experiments for unsupervised model learning over a labeled and an unlabeled multi-table stream.

Es laden ein: Die Dozenten der Informatik