Abstract

The success of a Case Based Reasoning (CBR) system depends on the quality of case data and the speed of the retrieval process that can be expensive in time especially when the number of cases gets large. To guarantee this quality, maintenance the contents of a case base becomes necessarily. As a result, the research area of Case Base Maintenance (CBM) has
drawn more and more attention to CBR systems. This paper provides a snapshot of the state of
the art, reviewing some important methods of maintaining case based reasoning. We introduce
a framework for distinguishing these methods and compare and analyze them. In addition, this
paper also presents simulations on data sets from U.C.I repository to show the effectiveness of
some CBM methods taking into account the accuracy, the size and the retrieval time of case
bases. Our simulation results which are obtained by compared well known reduction techniques
show that these CBM methods have good storage reduction ratios, satisfying classification
accuracies and short retrieval time.

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Index Terms

Computer Science

Artificial Intelligence

Key words

Case based reasoning

Case base maintenance

evaluating case base

Case base partitioning

Clustering

Selection method

Case base optimization