Refinding Data using Context based Memory Technique

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Abstract

Data retrieval is a major aspect of data mining. Many times users need to access the information they have previously come across, i.e. refinding the information. In this research, ReFinder, which is a context based information refinding system, is used. It uses natural recall characteristics of human memory. By this, users can refind files and web pages according to their previously accessed context. A query by context model is built over a context memory snapshot. These instances are organized in a clustered and associated manner and evolve in life cycles just like the human brain. An eight weeks study was observed and time, place and activity were found to be useful recall clues. Experimental results show that the technique of associative clustering leads to best precision and recall. On average, 16.5 seconds are needed to complete a refinding request against 86.32 seconds with other existing methods. Future challenges like automatic annotation and context degradation are also discussed.

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Index Terms

Computer Science Information Sciences

Keywords

Information refinding, context memory, association based clustering, decay