Department of Computing

PhD candidate: Yip Chi Kin
Chief Supervisor: Dr. Keith C.C.Chan
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Discovering Collaborative Patterns in eLearning from Meta-code Subsequence

Abstract

Nowadays, Computers increasingly afford new possibilities for collaborative learning, which are different in kind from those available in other contexts. Their advent may hopefully not only promote new forms of collaborative activity amongst learners, but also illuminate the nature of our human capabilities as collaborative learners. An important issue is, therefore, how is the hidden information to be revealed in collaborative learning process. In specialize web-based courseware, some timestamp techniques were developed in order to achieve accurate personalization browsing profiles. Discretization algorithm of temporal dataset is partitioning of time interval of *Events Codes*, and applied *Meta-Code sequence* in conceptual information modeling and data mining.

Meta-Coding characteristics is a conceptual methodology for meta-context and time. This Meta-type modeling is context-oriented by using codifying linguistic variables and temporal partitioning. The meta-context associated with client individually, especially in natural language information contexts. Discretization coding method for linguistic variables and time applied fuzzy quantification of information granules. The granulate time of events, millions of codes manipulated individually by computers, this fundamental computing paradigm shift as a meta-information processing. In fact, human behaviors in daily life, including most web-based conceptual information modeling in practice, could easily take the assumption of the objective reality.

This mathematical modeling tried to demonstrate in eLearning contexts. Actually, This structural algorithm could be applied to both generalization and specialization type of temporal mining. The steps of mining techniques as below:

Temporal data → Events Code → Fuzzy Information Granulation → Metacode → Contiguous Sequence matching → Collaborative patterns → Mining Results

Appendix:

Conformation Presentation http://yipchikin.net/phd/presentation.ppt
eLearning Platform http://yipchikin.net/phd/demochs.ppt
Bibliography & References http://yipchikin.net/phd/Bibliography.pdf
C++ Programs http://yipchikin.net/phd/program.pdf