Komkrit Udommanetanakit 2007: E-Stream: Evolution-based Technique for Stream Clustering. Master of Engineering (Computer Engineering), Major Field: Computer Engineering, Department of Computer Engineering. Thesis Advisor: Associate Professor Kitsana Waiyamai, Ph.D. 62 pages.

Stream clustering is a technique that performs cluster analysis over data stream and able to monitor the results in real time. In this research, we propose a new stream clustering technique called E-Stream (Evolution-based Stream Clustering) which can support 5 evolutions of data stream. These evolutions are appearance, disappearance, self evolution, merge and split. Also propose the suitable cluster representation and distance function for this framework. For the dataset which has these evolutions, the experimental results show that our technique yields better cluster quality than the existing techniques.

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