

## Evolving Knowledge Extraction from Online Resources

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**Abstract :** In this paper, we present an evolving knowledge extraction system named AKEOS (Automatic Knowledge Extraction from Online Sources). AKEOS consists of two modules, including a one-time learning module and an evolving learning module. The one-time learning module takes in user input query, and automatically harvests knowledge from online unstructured resources in an unsupervised way. The output of the one-time learning is a structured vector representing the harvested knowledge. The evolving learning module automatically schedules and performs repeated one-time learning to extract the newest information and track the development of an event. In addition, the evolving learning module summarizes the knowledge learned at different time points to produce a final knowledge vector about the event. With the evolving learning, we are able to visualize the key information of the event, discover the trends, and track the development of an event.

**Keywords :** evolving learning, knowledge extraction, knowledge graph, text mining

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