MINING IT BUSINESS TEXTS TO ANALYZE TECHNOLOGY TRENDS

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ABSTRACT

Purpose: The aim of this research is to use a text mining technique to analyze IT business documents semi-automatically to find information about, for example, the evolution of products/services firms produced over time, what new businesses they were interested in investing in, how they improved their products, and what other businesses they merged with.

Design/methodology/approach: We analyze online text documents semi-automatically using natural language processing (NLP) techniques such as collocation analysis, sub-language analysis, and information extraction. These techniques are used on a collections of business documents, accumulated over a long period of time, to yield important insights.

Findings: Using a huge amount of documents collected in a long period of time, we are able to find business trends of the IT businesses.

Research limitations/implications: The documents we use are still limited, for future research, more documents and new techniques should be applied.

Practical implications: This research can reveal, for example, the evolution of products/services firms produced over time, what new businesses they were interested in investing in, how they improved their products, and what other businesses they merged with. This information can help to trace firms' strategic evolution. In addition, financial analysts frequently get information from business reports in order to evaluate the financial position of the companies they are interested in. An analysis of how information in financial documents evolved over time can therefore help in studying changes in a firm's financial health.

Social implications: Similar techniques can also be applied with other types of documents in other domains such as social sciences to understand the social issues better.

Originality/value: Much research has been done using text analysis techniques in several areas such analyzing product reviews, clustering data, etc. However, this research analyzes business data to study business trend which has not been done earlier.