



Title: **A Software Tool for Data Visualization:
Text Mining and Clustering**

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Abstract:

Within the expanding field of software engineering, there is extensive growth in the amount of data being produced. As the quantity of data increases beyond what is practical for users to analyze independently, tools are needed to assist with this task. Data visualization tools are best suited to this task.

One arena for such a project is the Internet, which holds a massive amount of data. Many different kinds of websites, whether they are online libraries, professional and academic journals, or even business or personal finance sites, have a lot of data to present to their users. One way to allow users to collect the data best suited to them is to use a web crawler; to further develop the application into something truly useful, data visualization tools can be included. A particularly useful tool for searching through data yielded by the web crawler is to look at a cluster analysis (a diagram where clusters of like items are linked together).

Data visualization makes possible the rapid analysis of a large amount of data, which makes research more productive and timely. It can also help users to realize data patterns that they would not otherwise have been able recognize, and therefore can help expand research. The clustering methodology gives this an additional advantage in that patterns are grouped in the visualization. The three-dimensional representation gives an additional advantage in that it allows for a more thorough and rapid review of pertinent, related data.