CiteSpace is a modeling, visualization, and analysis tool for the study of complex and dynamic networks. It has been developed at Drexel University’s College of Information Science and Technology. CiteSpace is continuously evolving to support a wider range of tasks for visual analytics. CiteSpace is implemented as a Java application and it is freely available to users.

The unique focus of CiteSpace is on identifying and exploring emerging trends and transient patterns in a variety of evolving networks. CiteSpace introduces concepts such as turning points in networks and uses time slicing and network scaling techniques to increase the clarity of visualized networks and critical entities and relations in the evolution of underlying networks. CiteSpace also incorporates information from multiple sources on the Internet to provide an informative environment for its users.

CiteSpace can be used to analyze social networks, structural and temporal patterns in scientific citation networks, differentiate conflicting opinions in book reviews, and knowledge diffusion over geographic maps. CiteSpace has been used to visualize major shifts of focus in terrorism research with reference to terrorist attacks such as Oklahoma City Bombing and the September 11, 2001 terrorist attacks. It has been used to visualize conceptual revolutions in string theory in physics, basic research concerning mad cow disease and CJD, and prolonged scientific debates in mass extinctions research. Recently, the development of CiteSpace is expanded to support visual analysis of conflicting opinions expressed in customer reviews on Amazon, the spread of scholarly publications on the bird flu over geographic maps.

CiteSpace is evolving into a more generic visual analytics research and development platform. In particular, it will support a wider range of visual analytics tasks and accommodate computational linguistics, geovisualization, text mining, probabilistic modeling, and other features.