

The Global Event and Trend Archive Research (GETAR) project, with its website on Events Archiving (<http://eventsarchive.org>), devised interactive, integrated, digital library/archive systems coupled with linked and expert-curated webpage/tweet collections, supporting research on important events and trends. It allowed diverse stakeholder communities to interactively collect, organize, browse, visualize, study, analyze, summarize, and explore content and sources related to biodiversity, climate change, crises, disasters, elections, energy, environmental issues, geospatial information, resiliency, shootings, sustainability, violence, etc. GETAR leveraged and extended Virginia Tech research on digital libraries, Web archiving, information retrieval, natural language processing, text mining, machine learning, deep learning, and human-computer interaction.

GETAR supported multi-year collection of tweets and webpages, as well as their cleaning, curation, and archiving, along with utilization of archival content. The links between different content types, e.g., tweets and webpages, were leveraged to aid their gathering, organization, analysis, archiving, and utilization, such as through joint summarization. Roughly 5 billion tweets were collected, across over 1700 collections, covering hundreds of important events. Many collections have been analyzed and shared. Technology and data transfer has been aided by Virginia Tech University Libraries and the Internet Archive.

GETAR developed methods and systems to work with tweets and webpages, as well as biomedical/healthcare information, documents (e.g., journal articles, conference papers, theses/dissertations), images, news, and reviews. Some focused on specific types of events, such as crime, disasters, elections, and shootings. Analyses described behaviors, communication, diffusion / propagation, moods, and patterns, with both spatial and temporal aspects. Organizations studied included corporations, hotels, and government agencies. Digital library methods were advanced, and software was built to provide integrated and innovative services, including for analysis, browsing, classification, crawling, question answering, recommendation, searching, summarization, topic modeling, and visualization. Experimental studies, with content and users, validated system effectiveness, and aided stakeholders in their disciplinary research, included in fields across the sciences, engineering, social sciences, and humanities.