Design and Implementation of a Biomedical Image Retrieval System

M. Simpson, D. Demner-Fushman, S. Antani, G. Thoma

Abstract:

Images contained in biomedical publications are a significant source of information for clinicians, researchers and instructors. However, useful images are often buried within the full text of articles that may not be related to the information need at hand. Since current retrieval systems typically rely solely on the full text of articles to determine their relevance, the images and illustrations contained in highly ranked articles do not directly address the information need. Moreover, relevant images may not be retrieved at all. In this poster we describe the design and implementation of an information retrieval system that utilizes both image-related text and image features to retrieve images from biomedical publications. We show that by utilizing information specific to images--such as their caption, color and texture--our approach is more effective at retrieving clinically relevant images than relying on full text documents alone.