Compressing directed graphs with local symmetries

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We present a technique for the compression of directed graphs. As these graphs scale in size, they pose challenges in terms of storage and processing efficiency. We implemented two methods that compress directed graphs using local symmetries. These methods were subsequently combined with lossless compression algorithms and subjected to comparative analysis against state-of-the-art compression techniques tailored for directed graphs. Our evaluations were conducted on a dataset encompassing real-world graphs from various domains.

The results show the potential for improving the state-of-the-art methods by combining them with our approach, which is the basis for our future research.

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