Abstract

Graphs are ubiquitous and allow us to model entities and the relationships between them. Graph data is often observed directly in the natural world (e.g., telecommunication or social networks), and the success of many machine learning tasks such as classification, link prediction, and many others, depends mainly on learning a useful feature representation from graph. This study investigates several research studies that have been conducted in the field of graph representation learning. The growing attention in graph embedding in recent years raise the need for comparing the existing methods in terms of methodology and techniques. This paper summarizes the recent techniques and methods used for graph representation learning, and compare them together.