



NLP - Graph Embedding

A Compilation of the Advances of Graph Embedding in NLP

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Abstract

TODO

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List of abbreviations

Term	Abbreviation
X	X

1 Introduction

1.1 Motivation

1.2 Types of Graphs

- What is a Graph
- Directional Graphs
- Weighted Graphs
- Semantic Graphs
- Knowledge Graphs

1.3 Applications of Graph Embedding

- Visualization
- Network Compression
- Network Partitioning
- Node Classification
- Link Prediction

2 Embedding Types

2.1 Node Embedding

2.1.1 Node Attributes

2.2 Edge Embedding

2.3 Multidimensional and Hybrid Embedding

- Nodes of different Types
- different Relations of differing Magnitudes

3 Graph Embedding Techniques

3.1 Matrix Factorization

3.2 Deep Learning

3.2.1 Random Walk

3.2.2 GNN's

3.3 Edge Reconstruction

3.4 Graph Kernel

3.5 Generative Model

3.6 Unsupervised Methods

4 Performance Evaluation

5 References

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