RESIDE: Improving Distantly-Supervised Neural Relation Extraction using Side Information
Shikhar Vashisht, Rishabh Joshi, Sai Suman, Chiranjib Bhattacharyya, Partha Talukdar
Indian Institute of Science, Bangalore

Relation Extraction

Relation Extraction is the task of identifying semantic relationship between two entity mentions from plain text. Since the labeled training data is expensive to construct, Distant Supervision is used for automatically aligning relational instances in a knowledge base with unstructured text. This allows to construct large training data but with noisy labels.

Contributions

1. We propose RESIDE, a novel neural model which utilizes additional supervision from KG for improving distant supervised RE.
2. RESIDE uses Graph Convolution Network for modeling syntactic information and performs competitive even with limited side information.
3. Through extensive experiments on multiple real-world datasets, we demonstrate RESIDE’s effectiveness over state-of-the-art baselines.

Side Information Acquisition

RESIDE utilizes the following two additional supervision from Knowledge Graph:
1. Relation Alias side information: Extract relation phrases between target entities and links them to KG based on their closeness in embedding space.
2. Entity type side information: Utilizes entity type information from KG for putting constraints on predicted relation.

Source Code

http://github.com/mallabiisc/RESIDE

Contact: shikhar@iisc.ac.in