UNIVERSITÄT KOBLENZ · LANDAU
Fachbereich 4: Informatik

WeST People and Knowledge Networks
Institute for Web Science and Technologies

Enrichment of ontological taxonomies using a neural network approach

Bachelorarbeit

zur Erlangung des Grades einer Bachelor of Science (B.Sc.)
im Studiengang Informatik

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2.2 Taxonomy

- Ontology
  Cimiano et al. [3]
  Galarraga2016
- Taxonomy
  Cimiano et al. [3]
  Galarraga2016
- Connected taxonomy (maybe: consistent taxonomy)
- Root class
- Unlinked class
- Problem statement

2.3 Similarity

- semantic similarity e.g. distributional similarity
  Lin [12]
  Rodríguez and Egenhofer [16]
- geometrical similarity e.g. distance based-similarity, cosine similarity

2.4 Similarity-based classification

Chen et al. [2]
Zhang and Zhou [19]

2.5 Text processing

- N-Gram
  Jurafsky and Martin [10]

- Skip-Gram
  Guthrie et al. [9]

- Counting-based word representations
  Levy et al. [11]

- Predictive word representations
  Levy et al. [11]

3 Ontology learning

General concepts. Classification of considered problem in the task of ontology learning. Related work.
Cimiano et al. [3]
Wong et al. [18]
d'Amato et al. [4]
Petrucci et al. [14]
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4 Neural networks

Notion of neural networks will be introduced.

4.1 Recursive neural networks for graph representation

Scarselli et al. [17]

4.2 Deep neural networks for graph representation

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5.2 Supplementing with other resources

e.g. Wikipedia

6 Evaluation

6.1 Method

Dellschaft and Staab [5]

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6.3 Results

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