

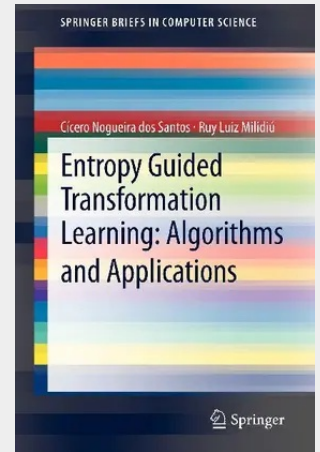
Entropy Guided Transformation Learning: Algorithms and Applications

Entropy Guided Transformation Learning: Algorithms and Applications (ETL) presents a machine learning algorithm for classification tasks. ETL generalizes Transformation Based Learning (TBL) by solving the TBL bottleneck: the construction of good template sets. ETL automatically generates templates using Decision Tree decomposition.

The authors describe ETL Committee, an ensemble method that uses ETL as the base learner. Experimental results show that ETL Committee improves the effectiveness of ETL classifiers. The application of ETL is presented to four Natural Language Processing (NLP) tasks: part-of-speech tagging, phrase chunking, named entity recognition and semantic role labeling. Extensive experimental results demonstrate that ETL is an effective way to learn accurate transformation rules, and shows better results than TBL with handcrafted templates for the four tasks. By avoiding the use of handcrafted templates, ETL enables the use of transformation rules to a greater range of tasks.

Suitable for both advanced undergraduate and graduate courses, **Entropy Guided Transformation Learning: Algorithms and Applications** provides a comprehensive introduction to ETL and its NLP applications.

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53,49 €
49,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781447129776
Medium: Buch
ISBN: 978-1-4471-2977-6
Verlag: Springer
Erscheinungstermin: 16.03.2012
Sprache(n): Englisch
Auflage: 1. Auflage 2012
Serie: SpringerBriefs in Computer Science
Produktform: Kartoniert
Gewicht: 154 g
Seiten: 78
Format (B x H): 155 x 235 mm

