

Contents

Feature Engineering

Fine-Grained Opinion Mining from Mobile App Reviews with Word Embedding Features	3
<i>Mario Sanger, Ulf Leser, and Roman Klinger</i>	
Feature Selection Using Multi-objective Optimization for Aspect Based Sentiment Analysis	15
<i>Md Shad Akhtar, Sarah Kohail, Amit Kumar, Asif Ekbal, and Chris Biemann</i>	
Feature Selection and Class-Weight Tuning Using Genetic Algorithm for Bio-molecular Event Extraction	28
<i>Amit Majumder, Asif Ekbal, and Sudip Kumar Naskar</i>	
Automated Lexicon and Feature Construction Using Word Embedding and Clustering for Classification of ASD Diagnoses Using EHR.	34
<i>Gondy Leroy, Yang Gu, Sydney Pettygrove, and Margaret Kurzius-Spencer</i>	
Multi-objective Optimisation-Based Feature Selection for Multi-label Classification	38
<i>Mohammed Arif Khan, Asif Ekbal, Eneldo Loza Mencía, and Johannes Furnkranz</i>	

Information Extraction

WikiTrends: Unstructured Wikipedia-Based Text Analytics Framework	45
<i>Michel Naim Gerguis, Cherif Salama, and M. Watheq El-Kharashi</i>	
An Improved PLDA Model for Short Text.	58
<i>Chaotao Chen and Jiangtao Ren</i>	
Mining Incoherent Requirements in Technical Specifications	71
<i>Patrick Saint-Dizier</i>	
Enriching Argumentative Texts with Implicit Knowledge.	84
<i>Maria Becker, Michael Staniek, Vivi Nastase, and Anette Frank</i>	
Technical Aspect Extraction from Customer Reviews Based on Seeded Word Clustering	97
<i>Jean-Marc Davril, Tony Leclercq, Maxime Cordy, and Patrick Heymans</i>	

Event Detection for Heterogeneous News Streams.	110
<i>Ida Mele and Fabio Crestani</i>	
Twitter User Profiling Model Based on Temporal Analysis of Hashtags and Social Interactions.	124
<i>Abir Gorrab, Ferihane Kboubi, Ali Jaffal, Bénédicte Le Grand, and Henda Ben Ghezala</i>	
Extracting Causal Relations Among Complex Events in Natural Science Literature	131
<i>Biswanath Barik, Erwin Marsi, and Pinar Öztürk</i>	
Supporting Experts to Handle Tweet Collections About Significant Events. . . .	138
<i>Ali Hürriyetoglu, Nelleke Oostdijk, Mustafa Erkan Başar, and Antal van den Bosch</i>	
Named Entity Classification Based on Profiles: A Domain Independent Approach.	142
<i>Isabel Moreno, M.T. Romá-Ferri, and Paloma Moreda</i>	
Information Extraction from Resource-Scarce Languages	
Does the Strength of Sentiment Matter? A Regression Based Approach on Turkish Social Media	149
<i>Ali Mert Ertugrul, Itir Onal, and Cengiz Acarturk</i>	
AL-TERp: Extended Metric for Machine Translation Evaluation of Arabic. . . .	156
<i>Mohamed El Marouani, Tarik Boudaa, and Nourddine Enneya</i>	
A Morphological Approach for Measuring Pair-Wise Semantic Similarity of Sanskrit Sentences.	162
<i>Vaishakh Keshava, Mounica Sanapala, Akshay Chowdhu Dinesh, and Sowmya Kamath Shevgoor</i>	
Word-Level Identification of Romanized Tunisian Dialect	170
<i>Chaima Aridhi, Hadhemi Achour, Emna Souissi, and Jihene Younes</i>	
Named Entity Recognition in Turkish: Approaches and Issues	176
<i>Doğan Küçük, Nursal Arıcı, and Dilek Küçük</i>	
Natural Language Processing Applications	
Simplified Text-to-Pictograph Translation for People with Intellectual Disabilities	185
<i>Leen Sevens, Vincent Vandeghinste, Ineke Schuurman, and Frank Van Eynde</i>	

What You Use, Not What You Do: Automatic Classification of Recipes	197
<i>Hanna Kicherer, Marcel Dittrich, Lukas Grebe, Christian Scheible, and Roman Klinger</i>	
Constructing Technical Knowledge Organizations from Document Structures	210
<i>Sebastian Furth and Joachim Baumeister</i>	
Applications of Natural Language Techniques in Solving SmartHome Use-Cases.	214
<i>Parnab Kumar Chanda, Nitish Varshney, and Ashok Subash</i>	
A Method for Querying Touristic Information Extracted from the Web	218
<i>Ermelinda Oro and Massimo Ruffolo</i>	
Towards Generating Object-Oriented Programs Automatically from Natural Language Texts for Solving Mathematical Word Problems	222
<i>Sourav Mandal and Sudip Kumar Naskar</i>	
Authorship Attribution System	227
<i>Oleksandr Marchenko, Anatoly Anisimov, Andrii Nykonenko, Tetiana Rossada, and Egor Melnikov</i>	
Neural Language Models and Applications	
Estimating Distributed Representations of Compound Words Using Recurrent Neural Networks	235
<i>Natthawut Kertkeidkachorn and Ryutaro Ichise</i>	
A Large-Scale CNN Ensemble for Medication Safety Analysis	247
<i>Liliya Akhtyamova, Andrey Ignatov, and John Cardiff</i>	
A Feature Based Simple Machine Learning Approach with Word Embeddings to Named Entity Recognition on Tweets	254
<i>Mete Taşpınar, Murat Can Ganiz, and Tankut Acarman</i>	
Challenges and Solutions with Alignment and Enrichment of Word Embedding Models	260
<i>Cem Şafak Şahin, Rajmonda S. Caceres, Brandon Oselio, and William M. Campbell</i>	
Legalbot: A Deep Learning-Based Conversational Agent in the Legal Domain	267
<i>Adebayo Kolawole John, Luigi Di Caro, Livio Robaldo, and Guido Boella</i>	

Using Word Embeddings for Computing Distances Between Texts and for Authorship Attribution	274
<i>Armin Hoenen</i>	
Combination of Neural Networks for Multi-label Document Classification . . .	278
<i>Ladislav Lenc and Pavel Král</i>	
Supporting Business Process Modeling Using RNNs for Label Classification	283
<i>Philip Hake, Manuel Zapp, Peter Fettke, and Peter Loos</i>	
A Convolutional Neural Network Based Sentiment Classification and the Convolutional Kernel Representation	287
<i>Shen Gao, Huaping Zhang, and Kai Gao</i>	
Quotology - Reading Between the Lines of Quotations	292
<i>Dwijen Rudrapal, Amitava Das, and B. Bhattacharya</i>	
Opinion Mining and Sentiment Analysis	
Automatically Labelling Sentiment-Bearing Topics with Descriptive Sentence Labels	299
<i>Mohamad Hardyman Barawi, Chenghua Lin, and Advait Siddharthan</i>	
Does Optical Character Recognition and Caption Generation Improve Emotion Detection in Microblog Posts?	313
<i>Roman Klinger</i>	
Identifying Right-Wing Extremism in German Twitter Profiles: A Classification Approach	320
<i>Matthias Hartung, Roman Klinger, Franziska Schmidtke, and Lars Vogel</i>	
An Approach for Defining the Author Reputation of Comments on Products	326
<i>Carlos A. de Sa, Roney L. de S. Santos, and Raimundo S. Moura</i>	
Quality of Word Embeddings on Sentiment Analysis Tasks	332
<i>Erion Çano and Maurizio Morisio</i>	
Question Answering Systems and Applications	
A Hierarchical Iterative Attention Model for Machine Comprehension	341
<i>Zhuang Liu, Degen Huang, Yunxia Zhang, and Chuan Zhang</i>	
A Syntactic Parse-Key Tree-Based Approach for English Grammar Question Retrieval.	353
<i>Langting Fang, Luu Anh Tuan, Lenan Wu, and Siu Cheung Hui</i>	

A Discriminative Possibilistic Approach for Query Translation Disambiguation	366
<i>Wiem Ben Romdhane, Bilel Elayeb, and Narjès Bellamine Ben Saoud</i>	
Building TALAA-AFAQ, a Corpus of Arabic FActoid Question-Answers for a Question Answering System.	380
<i>Asma Aouichat and Ahmed Guessoum</i>	
Detecting Non-covered Questions in Frequently Asked Questions Collections	387
<i>Mladen Karan and Jan Šnajder</i>	
Semantics-Based Models and Applications	
Vector Space Representation of Concepts Using Wikipedia Graph Structure . . .	393
<i>Armin Sajadi, Evangelos E. Milios, and Vlado Keselj</i>	
Composite Semantic Relation Classification	406
<i>Siamak Barzegar, Andre Freitas, Siegfried Handschuh, and Brian Davis</i>	
Vector Embedding of Wikipedia Concepts and Entities	418
<i>Ehsan Sherkat and Evangelos E. Milios</i>	
TEKNO: Preparing Legacy Technical Documents for Semantic Information Systems	429
<i>Sebastian Furth, Maximilian Schirm, Volker Belli, and Joachim Baumeister</i>	
Improving Document Classification Effectiveness Using Knowledge Exploited by Ontologies.	435
<i>Zenun Kastrati and Sule Yildirim Yayilgan</i>	
Text Summarization	
Document Aboutness via Sophisticated Syntactic and Semantic Features	441
<i>Marco Ponza, Paolo Ferragina, and Francesco Piccinno</i>	
Summarizing Web Documents Using Sequence Labeling with User-Generated Content and Third-Party Sources.	454
<i>Minh-Tien Nguyen, Duc-Vu Tran, Chien-Xuan Tran, and Minh-Le Nguyen</i>	
“What Does My Classifier Learn?” A Visual Approach to Understanding Natural Language Text Classifiers	468
<i>Jonas Paul Winkler and Andreas Vogelsang</i>	

Gated Neural Network for Sentence Compression Using Linguistic Knowledge.	480
<i>Yang Zhao, Hajime Senuma, Xiaoyu Shen, and Akiko Aizawa</i>	
A Study on Flexibility in Natural Language Generation Through a Statistical Approach to Story Generation.	492
<i>Marta Vicente, Cristina Barros, and Elena Lloret</i>	
Author Index	499

Natural Language Processing and Information Systems
22nd International Conference on Applications of
Natural Language to Information Systems, NLDB 2017,
Liège, Belgium, June 21-23, 2017, Proceedings
Frasincar, F.; Ittoo, A.; Nguyen, L.M.; Métais, E. (Eds.)
2017, XXII, 500 p. 91 illus., Softcover
ISBN: 978-3-319-59568-9