13th International Conference on Natural Language Processing (ICON-2016)

Varanasi, India 17 – 20 December 2016

ISBN: 978-1-5108-3788-1

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Association for Computational Linguistics All rights reserved.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Association for Computational Linguistics at the address below.

Association for Computational Linguistics 209 N. Eighth Street Stroudsburg, Pennsylvania 18360

Phone: 1-570-476-8006 Fax: 1-570-476-0860

acl@aclweb.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

Table of Contents

Keynote Lecture 1: Practical Use of Machine Translation in International Organizations Bruno Pouliquen
Integrating WordNet for Multiple Sense Embeddings in Vector Semantics David Foley and Jugal Kalita
Can SMT and RBMT Improve each other's Performance?- An Experiment with English-Hindi Translation
Debajyoty Banik, Sukanta Sen, Asif Ekbal and Pushpak Bhattacharyya
Composition of Compound Nouns Using Distributional Semantics Kyra Yee and Jugal Kalita
Towards Building a SentiWordNet for Tamil Abishek Kannan, Gaurav Mohanty and Radhika Mamidi
Extending AIDA framework by incorporating coreference resolution on detected mentions and pruning based on popularity of an entity Samaikya Akarapu and C Ravindranath Chowdary
Sentence Based Discourse Classification for Hindi Story Text-to-Speech (TTS) System Kumud Tripathi, Parakrant Sarkar and K. Sreenivasa Rao
Biomolecular Event Extraction using a Stacked Generalization based Classifier Amit Majumder, Asif Ekbal and Sudip Kumar Naskar
Syntax and Pragmatics of Conversation: A Case of Bangla Samir Karmakar and Soumya Sankar Ghosh
Dependency grammars as Haskell programs Tomasz Obrebski
Improving Document Ranking using Query Expansion and Classification Techniques for Mixed Scrip Information Retrieval
Subham Kumar, Anwesh Sinha Ray, Sabyasachi Kamila, Asif Ekbal, Sriparna Saha and Pushpal Bhattacharyya
Feature based Sentiment Analysis using a Domain Ontology Neha Yadav and C Ravindranath Chowdary90
Cross-lingual transfer parser from Hindi to Bengali using delexicalization and chunking Ayan Das, Agnivo Saha and Sudeshna Sarkar
Constraint Grammar-based conversion of Dependency Treebanks Eckhard Bick

Meaning Matters: Senses of Words are More Informative than Words for Cross-domain Sentiment A ysis Raksha Sharma, Sudha Bhingardive and Pushpak Bhattacharyya	
Raksha Sharma, Sudha Dinngardive and Lushpak Dhattacharyya	. 113
POS Tagging Experts via Topic Modeling Atreyee Mukherjee, Sandra Kübler and Matthias Scheutz	. 120
Graph theoretic interpretation of Bangla traditional grammar Samir Karmakar, Sayantani Banerjee and Soumya Ghosh	.129
A method for Automatic Text Summarization using Consensus of Multiple Similarity Measures Ranking Techniques Mukesh Kumar Jadon and Ayush Pareek	
Automatic Translation of English Text to Indian Sign Language Synthetic Animations Lalit Goyal and Vishal Goyal	. 144
Towards Deep Learning in Hindi NER: An approach to tackle the Labelled Data Sparsity Vinayak Athavale, Shreenivas Bharadwaj, Monik Pamecha, Ameya Prabhu and Manish Shr tava	
tava	. 154
Vaidya: A Spoken Dialog System for Health Domain Prathyusha Danda, Brij Mohan Lal Srivastava and Manish Shrivastava	. 161
Cosmopolitan Mumbai, Orthodox Delhi, Techcity Bangalore: Understanding City Specific Societal timent	Sen-
Aishwarya N Reganti, Tushar Maheshwari, Upendra Kumar and Amitava Das	. 167
Keynote Lecture 2: Neural (and other Machine Learning) Approaches to Text Normalization Richard Sproat	. 177
Wisdom of Students: A Consistent Automatic Short Answer Grading Technique Shourya Roy, Sandipan Dandapat, Ajay Nagesh and Narahari Y	. 178
A Recurrent Neural Network Architecture for De-identifying Clinical Records Shweta, Ankit Kumar, Asif Ekbal, Sriparna Saha and Pushpak Bhattacharyya	. 188
Twitter Named Entity Extraction and Linking Using Differential Evolution Utpal Kumar Sikdar and Björn Gambäck	. 198
Learning Non-Linear Functions for Text Classification Cohan Sujay Carlos and Geetanjali Rakshit	. 208
A Computational Analysis of Mahabharata Debarati Das, Bhaskarjyoti Das and Kavi Mahesh	. 219
Use of Features for Accentuation of ghañanta Words Samir Janardan Sohoni and Malhar A. Kulkarni	. 229

Learning to Identify Subjective Sentences Girish K. Palshikar, Manoj Apte, Deepak Pandita and Vikram Singh
Opinion Mining in a Code-Mixed Environment: A Case Study with Government Portals Deepak Gupta, Ankit Lamba, Asif Ekbal and Pushpak Bhattacharyya24
Use of Semantic Knowledge Base for Enhancement of Coherence of Code-mixed Topic-Based Aspec Clusters
Kavita Asnani and Jyoti D Pawar
Genetic Algorithm (GA) Implementation for Feature Selection in Manipuri POS Tagging Kishorjit Nongmeikapam and Sivaji Bandyopadhyay
Effect of Syntactic Features in Bangla Sentence Comprehension Manjira Sinha, Tirthankar Dasgupta and Anupam Basu27
A New Feature Selection Technique Combined with ELM Feature Space for Text Classification Rajendra Kumar Roul and Pranav Rai
On Why Coarse Class Classification is Bottleneck in Noun Compound Interpretation Girishkumar Ponkiya, Pushpak Bhattacharyya and Girish K. Palshikar
Verbframator: Semi-Automatic Verb Frame Annotator Tool with Special Reference to Marathi Hanumant Redkar, Sandhya Singh, Nandini Ghag, Jai Paranjape, Nilesh Joshi, Malhar Kulkarr and Pushpak Bhattacharyya
Towards Building A Domain Agnostic Natural Language Interface to Real-World Relational Database Sree Harsha Ramesh, Jayant Jain, Sarath K S and Krishna R Sundaresan
Experimental Study of Vowels in Nagamese, Ao and Lotha: Languages of Nagaland Joyanta Basu, Tulika Basu, Soma Khan, Madhab Pal, Rajib Roy and Tapan Kumar Basu 31
Perception of Phi-Phrase boundaries in Hindi. Somnath Roy