

Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL HLT 2022)

Industry Papers

Online
10 – 15 July 2022

ISBN: 978-1-7138-5619-1

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© (2022) by the Association for Computational Linguistics
All rights reserved.

Printed with permission by Curran Associates, Inc. (2022)

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

<i>Scalable and Robust Self-Learning for Skill Routing in Large-Scale Conversational AI Systems</i> Mohammad Kachuee, Jinseok Nam, Sarthak Ahuja, Jin-Myung Won and Sungjin Lee	1
<i>CREATER: CTR-driven Advertising Text Generation with Controlled Pre-Training and Contrastive Fine-Tuning</i> Penghui Wei, Xuanhua Yang, ShaoGuo Liu, Liang Wang and Bo Zheng	9
<i>Augmenting Poetry Composition with Verse by Verse</i> David Uthus, Maria Voitovich and R.J. Mical	18
<i>AB/BA analysis: A framework for estimating keyword spotting recall improvement while maintaining audio privacy</i> Raphael Petegrosso, VasistaKrishna Baderdinni, Thibaud Senechal and Benjamin Bullough	27
<i>Temporal Generalization for Spoken Language Understanding</i> Judith Gaspers, Anoop Kumar, Greg Ver Steeg and Aram Galstyan	37
<i>An End-to-End Dialogue Summarization System for Sales Calls</i> Abdelkadir Asi, Song Wang, Roy Eisenstadt, Dean Geckt, Yarin Kuper, Yi Mao and Royi Ronen	45
<i>Controlled Data Generation via Insertion Operations for NLU</i> Manoj Kumar, Yuval Merhav, Haidar Khan, Rahul Gupta, Anna Rumshisky and Wael Hamza	54
<i>Easy and Efficient Transformer: Scalable Inference Solution For Large NLP Model</i> Gongzheng Li, Yadong Xi, Jingzhen Ding, Duan Wang, Ziyang Luo, Rongsheng Zhang, Bai Liu, Changjie Fan, Xiaoxi Mao and Zeng Zhao	62
<i>Aspect-based Analysis of Advertising Appeals for Search Engine Advertising</i> Soichiro Murakami, Peinan Zhang, Sho Hoshino, Hidetaka Kamigaito, Hiroya Takamura and Manabu Okumura	69
<i>Self-supervised Product Title Rewrite for Product Listing Ads</i> Xue Zhao, Dayiheng Liu, Junwei Ding, Liang Yao, Mahone Yan, HuiBo Wang and Wenqing Yao	79
<i>Efficient Semi-supervised Consistency Training for Natural Language Understanding</i> George Leung and Joshua Tan	86
<i>Distantly Supervised Aspect Clustering And Naming For E-Commerce Reviews</i> Prateek Sircar, Aniket Chakrabarti, Deepak Gupta and Anirban Majumdar	94
<i>Local-to-global learning for iterative training of production SLU models on new features</i> Yulia Grishina and Daniil Sorokin	103
<i>CULG: Commercial Universal Language Generation</i> Haonan Li, Yameng Huang, Yeyun Gong, Jian Jiao, Ruofei Zhang, Timothy Baldwin and Nan Duan	112
<i>Constraining word alignments with posterior regularization for label transfer</i> Thomas Gueudre and Kevin Martin Jose	121

<i>Explaining the Effectiveness of Multi-Task Learning for Efficient Knowledge Extraction from Spine MRI Reports</i>	
Arijit Sehanobish, McCullen Sandora, Nabila Abraham, Jayashri Pawar, Danielle Torres, Anasuya Das, Murray Becker, Richard Herzog, Benjamin Odry and Ron Vianu	130
<i>FPI: Failure Point Isolation in Large-scale Conversational Assistants</i>	
Rinat Khaziev, Usman Shahid, Tobias Röding, Rakesh Chada, Emir Kapanci and Pradeep Natarajan	141
<i>Asynchronous Convergence in Multi-Task Learning via Knowledge Distillation from Converged Tasks</i>	
Weiyi Lu, Sunny Rajagopalan, Priyanka Nigam, Jaspreet Singh, Xiaodi Sun, Yi Xu, Belinda Zeng and Trishul Chilimbi	149
<i>Augmenting Training Data for Massive Semantic Matching Models in Low-Traffic E-commerce Stores</i>	
Ashutosh Joshi, Shankar Vishwanath, Choon Hui Teo, Vaclav Petricek, Vishy Vishwanathan, Rahul Bhagat and Jonathan May	160
<i>Retrieval Based Response Letter Generation For a Customer Care Setting</i>	
Biplob Biswas, Renhao Cui and Rajiv Ramnath	168
<i>Medical Coding with Biomedical Transformer Ensembles and Zero/Few-shot Learning</i>	
Angelo Ziletti, Alan Akbik, Christoph Berns, Thomas Herold, Marion Legler and Martina Viell	176
<i>Knowledge extraction from aeronautical messages (NOTAMs) with self-supervised language models for aircraft pilots</i>	
Alexandre Arnold, Fares Ernez, Catherine Kobus and Marion-Cécile Martin	188
<i>Intent Discovery for Enterprise Virtual Assistants: Applications of Utterance Embedding and Clustering to Intent Mining</i>	
Minhua Chen, Badrinath Jayakumar, Michael Johnston, S. Eman Mahmoodi and Daniel Pressel	197
<i>ReFinED: An Efficient Zero-shot-capable Approach to End-to-End Entity Linking</i>	
Tom Ayoola, Shubhi Tyagi, Joseph Fisher, Christos Christodoulopoulos and Andrea Pierleoni	209
<i>Lightweight Transformers for Conversational AI</i>	
Daniel Pressel, Wenshuo Liu, Michael Johnston and Minhua Chen	221
<i>NER-MQMRC: Formulating Named Entity Recognition as Multi Question Machine Reading Comprehension</i>	
Anubhav Shrimal, Avi Jain, Kartik Mehta and Promod Yenigalla	230
<i>What Do Users Care About? Detecting Actionable Insights from User Feedback</i>	
Kasturi Bhattacharjee, Rashmi Gangadharaiyah, Kathleen McKeown and Dan Roth	239
<i>CTM - A Model for Large-Scale Multi-View Tweet Topic Classification</i>	
Vivek Kulkarni, Kenny Leung and Aria Haghighi	247
<i>Developing a Production System for Purpose of Call Detection in Business Phone Conversations</i>	
Elena Khasanova, Pooja Hiranandani, Shayna Gardiner, Cheng Chen, Simon Corston-Oliver and Xue-Yong Fu	259
<i>Adversarial Text Normalization</i>	
Joanna Bitton, Maya Pavlova and Ivan Evtimov	268

<i>Constraint-based Multi-hop Question Answering with Knowledge Graph</i> Sayantan Mitra, Roshni Ramnani and Shubhashis Sengupta	280
<i>Fast Bilingual Grapheme-To-Phoneme Conversion</i> Hwa-Yeon Kim, Jong-Hwan Kim and Jae-Min Kim	289
<i>Knowledge Extraction From Texts Based on Wikidata</i> Anastasia Shimorina, Johannes Heinecke and Frédéric Herledan	297
<i>AIT-QA: Question Answering Dataset over Complex Tables in the Airline Industry</i> Yannis Katsis, Saneem Ahmed Chemmengath, Vishwajeet Kumar, Samarth Bharadwaj, Mustafa Canim, Michael Glass, Alfio Gliozzo, Feifei Pan, Jaydeep Sen, Karthik Sankaranarayanan and Soumen Chakrabarti	305
<i>Parameter-efficient Continual Learning Framework in Industrial Real-time Text Classification System</i> Tao Zhu, Zhe Zhao, Weijie Liu, Jiachi Liu, Yiren Chen, Weiquan Mao, Haoyan Liu, Kunbo Ding, Yudong Li and Xuefeng Yang	315
<i>Self-Aware Feedback-Based Self-Learning in Large-Scale Conversational AI</i> Pragaash Ponnusamy, Clint Solomon Mathialagan, Gustavo Aguilar, Chengyuan Ma and Chenlei Guo	324
<i>Fast and Light-Weight Answer Text Retrieval in Dialogue Systems</i> Hui Wan, Siva Sankalp Patel, J William Murdock, Saloni Potdar and Sachindra Joshi	334
<i>BLINK with Elasticsearch for Efficient Entity Linking in Business Conversations</i> Md Tahmid Rahman Laskar, Cheng Chen, Aliaksandr Martsinovich, Jonathan Johnston, Xue-Yong Fu, Shashi Bhushan TN and Simon Corston-Oliver	344
<i>Q2R: A Query-to-Resolution System for Natural-Language Queries</i> Shiau Hong Lim and Laura Wynter	353
<i>Identifying Corporate Credit Risk Sentiments from Financial News</i> Noujoud Ahabali, Xinyuan Liu, Albert Aristotle Nanda, Jamie Stark, Ashit Talukder and Rupinder Paul Khandpur	362