ACL 2018

Machine Reading for Question Answering

Proceedings of the Workshop

July 19, 2018 Melbourne, Australia

facebook NAVER

©2018 The Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL) 209 N. Eighth Street Stroudsburg, PA 18360 USA

Tel: +1-570-476-8006 Fax: +1-570-476-0860 acl@aclweb.org

ISBN 978-1-948087-39-1

Introduction

Machine Reading for Question Answering (MRQA) has become an important testbed for evaluating how well computer systems understand human language, as well as a crucial technology for industry applications such as search engines and dialog systems. The research community has recently created a multitude of large-scale datasets over text sources such as Wikipedia (WikiReading, SQuAD, WikiHop), news and other articles (CNN/Daily Mail, NewsQA, RACE), fictional stories (MCTest, CBT, NarrativeQA), and general web sources (MS MARCO, TriviaQA, SearchQA). These new datasets have in turn inspired an even wider array of new question answering systems.

Despite this rapid progress, there is yet much to understand about these datasets and systems. While model performance is rapidly improving in domain for each dataset, generalization suffers when models are evaluated on new domains and datasets. Moreover, current model development focuses primarily on improving the test accuracy of models trained on in-domain data. Focusing solely on accuracy obscures other important desiderata, including model interpretability, robustness to distributional shift, ability to abstain from answering when there is no adequate answer, and adequate modeling of inference (e.g., entailment and multi-sentence reasoning). Similarly, the diversity of recent datasets call for an analysis of various natural language phenomena (coreference, paraphrase, entailment, multi-hop reasoning) these datasets present.

The goal of this workshop is to gather researchers to address and discuss recent research on MRQA systems and datasets. Currently, reading comprehension models are commonly presented at various venues such as ACL, EMNLP, NIPS, ICML, ICLR; this workshop will benefit the community by serving as a central venue for discussions.

The program features 11 new papers and 5 cross-submissions from related areas, to be presented as both posters and talks. We are also excited to host remarkable invited speakers, including Phil Blunsom, Antoine Bordes, Jianfeng Gao, Hannaneh Hajishirzi, Sebastian Riedel, Richard Socher.

We thank the program committee, the ACL workshop chairs, the invited speakers, our sponsors Facebook and Naver and our steering committee: Antoine Bordes, Percy Liang, Luke Zettlemoyer.

Eunsol Choi, Minjoon Seo, Danqi Chen, Robin Jia, Jonathan Berant

Organizing Committee:

Eunsol Choi, University of Washington Minjoon Seo, NAVER & University of Washington Danqi Chen, Stanford University Robin Jia, Stanford University Jonathan Berant, Tel-Aviv University

Program Committee:

Yoav Artzi

Danish Contractor

Rajarshi Das

Bhuwan Dhingra

Xinya Du

Matt Gardner

Mor Geva

Kevin Gimpel

Luheng He

Jonathan Herzig

Mohit Iyyer

Mandar Joshi

Dongyeop Kang

Ni Lao

Kenton Lee

Nasrin Mostafazadeh

Karthik Narasimhan

Rodrigo Nogueira

Panupong (Ice) Pasupat

Hoifung Poon

Siva Reddy

Xiang Ren

Tim Rocktäschel

Shimon Salant

Swabha Swayamdipta

Kristina Toutanova

Adam Trischler

Shuohang Wang

Tong Wang

Johannes Welbl

Caiming Xiong

Victor Zhong

Table of Contents

Ruminating Reader: Reasoning with Gated Multi-hop Attention Yichen Gong and Samuel Bowman
Systematic Error Analysis of the Stanford Question Answering Dataset Marc-Antoine Rondeau and T. J. Hazen
A Multi-Stage Memory Augmented Neural Network for Machine Reading Comprehension Seunghak Yu, Sathish Reddy Indurthi, Seohyun Back and Haejun Lee
Tackling Adversarial Examples in QA via Answer Sentence Selection Yuanhang Ren, Ye Du and Di Wang
DuReader: a Chinese Machine Reading Comprehension Dataset from Real-world Applications Wei He, Kai Liu, Jing Liu, Yajuan Lyu, Shiqi Zhao, Xinyan Xiao, Yuan Liu, Yizhong Wang, Hua Wu, Qiaoqiao She, Xuan Liu, Tian Wu and Haifeng Wang
Robust and Scalable Differentiable Neural Computer for Question Answering Jörg Franke, Jan Niehues and Alex Waibel
A Systematic Classification of Knowledge, Reasoning, and Context within the ARC Dataset Michael Boratko, Harshit Padigela, Divyendra Mikkilineni, Pritish Yuvraj, Rajarshi Das, Andrew McCallum, Maria Chang, Achille Fokoue-Nkoutche, Pavan Kapanipathi, Nicholas Mattei, Ryan Musa, Kartik Talamadupula and Michael Witbrock
RECIPE: Applying Open Domain Question Answering to Privacy Policies Yan Shvartzshanider, Ananth Balashankar, Thomas Wies and Lakshminarayanan Subramanian . 71
Neural Models for Key Phrase Extraction and Question Generation Sandeep Subramanian, Tong Wang, Xingdi Yuan, Saizheng Zhang, Adam Trischler and Yoshua Bengio
Comparative Analysis of Neural QA models on SQuAD Soumya Wadhwa, Khyathi Chandu and Eric Nyberg
Adaptations of ROUGE and BLEU to Better Evaluate Machine Reading Comprehension Task An Yang, Kai Liu, Jing Liu, Yajuan Lyu and Sujian Li98

Workshop Program

Thursday, July 19, 2018

8:45–9:00 *Opening Remarks*

Session 1

9:00–9:35 Invited Talk: Phil Blunsom, University of Oxford / Deepmind

9:35–10:10 Invited Talk: Sebastian Riedel, University College London

10:10-10:30 Best Paper Talk: A Systematic Classification of Knowledge, Reasoning, and Con-

text within the ARC Dataset

10:30–11:00 Morning coffee break

Session 2

11:00-11:35 Invited Talk: Richard Socher, Salesforce Research

11:35-12:10 Invited Talk: Jianfeng Gao, Microsoft Research

12:10-13:45 Lunch

Thursday, July 19, 2018 (continued)

Session 3

13:45–14:20	Invited Talk: Antoine Bordes, Facebook AI Research
14:20-15:30	Poster Session (with a spotlight presentation)
14:20-15:30	Ruminating Reader: Reasoning with Gated Multi-hop Attention Yichen Gong and Samuel Bowman
14:20-15:30	Systematic Error Analysis of the Stanford Question Answering Dataset Marc-Antoine Rondeau and T. J. Hazen
14:20-15:30	A Multi-Stage Memory Augmented Neural Network for Machine Reading Comprehension Seunghak Yu, Sathish Reddy Indurthi, Seohyun Back and Haejun Lee
14:20-15:30	Tackling Adversarial Examples in QA via Answer Sentence Selection Yuanhang Ren, Ye Du and Di Wang
14:20-15:30	DuReader: a Chinese Machine Reading Comprehension Dataset from Real-world Applications Wei He, Kai Liu, Jing Liu, Yajuan Lyu, Shiqi Zhao, Xinyan Xiao, Yuan Liu, Yizhong Wang, Hua Wu, Qiaoqiao She, Xuan Liu, Tian Wu and Haifeng Wang
14:20-15:30	Robust and Scalable Differentiable Neural Computer for Question Answering Jörg Franke, Jan Niehues and Alex Waibel
14:20-15:30	A Systematic Classification of Knowledge, Reasoning, and Context within the ARC Dataset Michael Boratko, Harshit Padigela, Divyendra Mikkilineni, Pritish Yuvraj, Rajarshi Das, Andrew McCallum, Maria Chang, Achille Fokoue-Nkoutche, Pavan Kapanipathi, Nicholas Mattei, Ryan Musa, Kartik Talamadupula and Michael Witbrock
14:20-15:30	RECIPE: Applying Open Domain Question Answering to Privacy Policies Yan Shvartzshanider, Ananth Balashankar, Thomas Wies and Lakshminarayanan Subramanian
14:20-15:30	Neural Models for Key Phrase Extraction and Question Generation Sandeep Subramanian, Tong Wang, Xingdi Yuan, Saizheng Zhang, Adam Trischler and Yoshua Bengio

Thursday, July 19, 2018 (continued)

14:20-15:30	Comparative Analysis of Neural QA models on SQuAD Soumya Wadhwa, Khyathi Chandu and Eric Nyberg
14:20-15:30	Adaptations of ROUGE and BLEU to Better Evaluate Machine Reading Comprehension Task An Yang, Kai Liu, Jing Liu, Yajuan Lyu and Sujian Li
15:30–16:00	Afternoon coffee break

16:00–17:00 Panel Discussion