DialDoc 2022

**Proceedings of the Second DialDoc Workshop on
Document-grounded Dialogue and Conversational Question
Answering**

Proceedings of the Workshop

May 26, 2022

The DialDoc organizers gratefully acknowledge the support from the following sponsors.

Gold

IBM **Research** AI

Order copies of this and other ACL proceedings from:

Introduction

Welcome to the Second Workshop on Document-grounded Dialogue and Conversational Question Answering (DialDoc) co-located with ACL 2022.

Following the exiting outcome for the First DialDoc Workshop co-located at ACL-IJCNLP 2021, we continue the goal and effort to explore document knowledge for information-seeking goal-oriented dialogue systems. There is a vast amount of document content created every day by human writers to communicate with human readers for sharing knowledge, ranging from encyclopedias to customer service FAQs. Making the document content accessible to users via conversational systems and scaling it to various domains could be a meaningful yet challenging task. There are significant individual research threads that show promise in handling heterogeous knowledge embedded in documents for building conversational systems, including (1) unstructured content, such as text passages; (2) semi-structured content, such as tables or lists; (3) multi-modal content, such as images and videos along with text descriptions, and so on. The purpose of the workshop is to invite researchers and practitioners to bring their individual perspectives on the subject of document-grounded dialogue and conversational question answering to advance the field in a community-wise joint effort.

Different than the First DialDoc Workshop, we highlight the challenge of the scalability on building information-seeking goal-oriented dialogue systems in this workshop. We also propose a special theme on on scaling up document-grounded dialogue systems especially for *low-resource* domains, such as minority language support and emerging and unforeseen situations such as COVID-19 pandemic. In addition, for the Shared Task on modeling goal-oriented information-seeking dialogues, one of the tasks is based on the low-resource setting.

For the Shared Task competition, it mainly focuses on building open-book goal-oriented information-seeking conversation systems. The task are to generate agent responses based on dialogue history and domain documents, where each dialogue could correspond to multiple grounding documents. It includes two leaderbards based on different settings: the first one (*SEEN* leaderboard) is that all dialogues in the test data are grounded in the documents from the same domains as the training data; the second one (*UNSEEN* leaderboard) is that all dialogues in the test data are grounded in the documents from an unseen domain. There are a total of 22 teams that participated in the Dev Phase. For the final Test Phase, 10 teams submitted to the leaderboards. Many submissions outperform baseline significantly. On the *SEEN* leaderboard, the best-performing system achieved 52.2 F1 comparing to 35.95 by the baseline. On the *UNSEEN* leaderboard, the best-performing system achieved 34.65 F1 comparing to 19.26 by the baseline.

In this workshop, we have the research track and technical system track for Shared Task. There are a total 21 submissions. There are 14 accepted papers in the research track, including 12 long papers and 2 short papers. There are 6 accepted papers in the technical system track. The workshop program features 18 paper presentations either as a poster or oral presentation. We are also fortunate to have invited talks from Jeff Dalton, Michel Galley, Mari Ostendorf, Siva Reddy and Zhou Yu.

Finally, we would like thank all people who contributed to this workshop: the authors for their paper submissions, the teams for participating the Shared Task, the program committee members for their fundamental contributions, ACL workshop co-chair for the guidance and the amazing invited speakers. Special thanks to IBM Research for sponsoring the rewards for the Shared Task competition.

Song, Chengguang, Ellen, Hui, Caixia, Svitlana

Organizing Committee

Organizers

Song Feng, Amazon AWS AI
Chengguang Tang, Alibaba DAMO Research
Ellen (Zeqiu) Wu, University of Washington
Hui Wan, IBM Research AI
Caixia Yuan, Beijing University of Posts and Telecommunication
Svitlana Vakulenko, Amazon

Program Committee

Program Chairs

Amanda Buddemeyer, University of Pittsburgh
Asli Celikyilmaz, Meta AI Research
Bowen Yu, Chinese Academy of Sciences
Chen Henry Wu, Carnegie Mellon University
Chulaka Gunasekara, IBM Research AI
Chun Gan, JD Research
Cunxiang Wang, Westlake University
Danish Contractor, IBM Research
Dian Yu, Tencent
Diane Litman, University of Pittsburgh
Ehud Reiter, University of Aberdeen
Elizabeth Clark, University of Washington
Fanghua Ye, University College London
Tao Feng, Monash University
Guanyi Chen, Utrecht University
Hanjie Chen, University of Virginia
Hao Zhou, Tencent
Haotian Cui, Toronto University
Haochen Liu, Michigan State University
Houyu Zhang, Amazon
Ioannis Konstas, Heriot-Watt University
Jingjing Xu, Peking University
Jia-Chen Gu, USTC
Jinfeng Xiao, UIUC
Jian Wang, The Hong Kong Polytechnic University
Jingyang Li, Alibaba DAMO Academy
Jiwei Li, SHANNON.AI
Jun Xu, Baidu
Kai Song, ByteDance
Ke Shi, Tencent
Kun Qian, Columbia University
Kaixuan Zhang, Northwestern University
Libo Qin, MLNLP
Michael Johnston, Interactions
Meng Qu, MILA
Minjoon Seo, KAIST
Pei Ke, Tsinghua University
Peng Qi, Stanford University
Ravneet Singh, University of Pittsburgh
Ryuichi Takanobu, Tsinghua University
Rongxing Zhu, The University of Melbourne
Seokhwan Kim, Amazon Alexa AI
Shehzaad Dhuliawala, Microsoft Research Montreal
Srinivas Bangalore, Interactions
Zejiang Shen, AllenAI
Vaibhav Adlakha, MCGill and MILA

Wanjun Zhong, MSRA
Xi Chen, Tencent
Yifan Gao, The Chinese University of Hong Kong
Yekun Chai, Baidu
Yinhe Zheng, Alibaba DAMO Academy
Yiwei Jiang, Ghent University
Yajing Sun, Chinese Academy of Sciences
Yunqi Qiu, Chinese Academy of Sciences
Yosi Mass, IBM Research
Yutao Zhu, University of Montreal
Zheng Zhang, Tsinghua University
Zhenyu Zhang, Chinese Academy of Sciences
Zhenzhong Lan, Westlake University
Zhixing Tian, JD

Keynote Talk: How grounded is document-grounded conversational AI?

Siva Reddy

McGill University, Facebook CIFAR AI, Mila Quebec AI

Bio: Siva Reddy is an Assistant Professor in the School of Computer Science and Linguistics at McGill University. He is a Facebook CIFAR AI Chair and a core faculty member of Mila Quebec AI Institute. Before McGill, he was a postdoctoral researcher at Stanford University. He received his PhD from the University of Edinburgh in 2017, where he was a Google PhD Fellow. His research focuses on representation learning for language that facilitates systematic generalization, reasoning and conversational modeling. He received the 2020 VentureBeat AI Innovation Award in NLP, and the best paper award at EMNLP 2021.

Keynote Talk: Knowledge-Grounded Conversation Search and Understanding: Current Progress and Future Directions

Jeff Dalton

University of Glasgow

Bio: Dr. Jeff Dalton is an Assistant Professor in the School of Computing Science at the University of Glasgow where he leads the Glasgow Representation and Information Learning Lab (GRILL) (https://grilllab.ai). His research focuses on text understanding and conversational information seeking. He completed his Ph.D. at the University of Massachusetts Amherst in the Center for Intelligent Information Retrieval. Later in Google Research, he worked on Information Extraction as part of the Knowledge Discovery Team (Knowledge Vault) and on language understanding in the Assistant Response Ranking team. He is the lead organizer for the TREC Conversational Assistance Track (CAsT) (http://treccast.ai) and previously helped organize the Complex Answer Retrieval track. He is the recipient of a prestigious UKRI Turing AI Acceleration Fellowship on Neural Conversational Assistants and received research awards from Google, Amazon, and Bloomberg. He is the faculty advisor for the 2021/2022 Alexa Prize Taskbot challenge team, GRILLBot. He holds multiple patents in retrieval, information extraction, and question answering.

Keynote Talk: Knowledge-infused dialog systems

Zhou Yu
Columbia University

Bio: Zhou Yu joined the CS department at Columbia University in Jan 2021 as an Assistant Professor (http://www.cs.columbia.edu/ zhouyu/). Before that, she was an Assistant Professor at UC Davis. She obtained her Ph.D. from Carnegie Mellon University in 2017. Zhou has built various dialog systems that have a real impact, such as a job interview training system, a depression screening system, and a second language learning system. Her research interests include dialog systems, language understanding and generation, vision and language, human-computer interaction, and social robots. Zhou received an ACL 2019 best paper nomination, featured in Forbes 2018 30 under 30 in Science, and won the 2018 Amazon Alexa Prize.

Keynote Talk: Interactive Document Generation

Michel Galley
Microsoft Research

Bio: Michel Galley is a Senior Principal Researcher at Microsoft Research. His research interests are in the areas of natural language processing and machine learning, with a particular focus on conversational AI, text generation, statistical machine translation, and summarization. He obtained his M.S. and Ph.D. from Columbia University and his B.S. from EPFL, all in Computer Science. Before joining Microsoft Research, he was a Research Associate in the CS department at Stanford University. He co-authored more than 70 scientific papers, many of which appeared at top NLP, AI, and ML conferences.

Keynote Talk: Understanding conversation context is central to conversational AI

Mari Ostendorf
University of Washington

Bio: Mari Ostendorf is an Endowed Professor of System Design Methodologies in the Electrical Computer Engineering Department at the University of Washington and currently serves as UW's Vice Provost for Research. She is a Fellow of the IEEE, ISCA and ACL, a former Australian-American Fulbright Scholar, a member of the Washington State Academy of Sciences, a Corresponding Fellow of the Royal Society of Edinburgh, and a member of the National Academy of Engineering. For her contributions in spoken language processing, she was awarded the 2018 IEEE James L. Flanagan Speech and Audio Processing Award. In 2017, she served as a faculty advisor for the student team winning the inaugural AlexaPrize competition to build a socialbot, and conversational AI is a focus of her current work. Her research explores dynamic models for understanding and generating speech and text, particularly in multi-party contexts, and it contributes to a variety of applications, including call center analytics, information seeking dialogues, equitable assessments in education, and clinical information extraction.

Table of Contents

Program

Thursday, May 26, 2022

09:00 - 09:05   *Opening Remark*

09:05 - 09:40   *Invited talk I by Siva Reddy*

09:40 - 10:25   *Paper presentation*

Conversation- and Tree-Structure Losses for Dialogue Disentanglement
Tianda Li, Jia-Chen Gu, Zhen-Hua Ling and Quan Liu

Construction of Hierarchical Structured Knowledge-based Recommendation Dialogue Dataset and Dialogue System
Takashi Kodama, Ribeka Tanaka and Sadao Kurohashi

Retrieval-Free Knowledge-Grounded Dialogue Response Generation with Adapters
Yan Xu, Etsuko Ishii, Samuel Cahyawijaya, Zihan Liu, Genta Indra Winata, Andrea Madotto, Dan SU and Pascale Fung

10:25 - 10:40   *Coffee break*

10:40 - 11:15   *Invited talk II by Jeff Dalton*

11:15 - 11:55   *Paper lightning talk I*

TRUE: Re-evaluating Factual Consistency Evaluation
Or Honovich, Roee Aharoni, Jonathan Herzig, Hagai Taitelbaum, Doron Kukliansy, Vered Cohen, Thomas Scialom, Idan Szpektor, Avinatan Hassidim and Yossi Matias

Pseudo Ambiguous and Clarifying Questions Based on Sentence Structures Toward Clarifying Question Answering System
Yuya Nakano, Seiya Kawano, Koichiro Yoshino, Katsuhito Sudoh and Satoshi Nakamura

Parameter-Efficient Abstractive Question Answering over Tables or Text
Vaishali Pal, Evangelos Kanoulas and Maarten de Rijke

Conversational Search with Mixed-Initiative - Asking Good Clarification Questions backed-up by Passage Retrieval
Yosi Mass, Doron Cohen, Asaf Yehudai and David Konopnicki

Graph-combined Coreference Resolution Methods on Conversational Machine Reading Comprehension with Pre-trained Language Model
Zhaodong Wang and Kazunori Komatani

G4: Grounding-guided Goal-oriented Dialogues Generation with Multiple Documents
Shiwei Zhang, Yiyang Du, Guanzhong Liu, Zhao Yan and Yunbo Cao

UniDS: A Unified Dialogue System for Chit-Chat and Task-oriented Dialogues
Xinyan Zhao, Bin He, Yasheng Wang, Yitong Li, Fei Mi, Yajiao Liu, Xin Jiang, Qun Liu and Huanhuan Chen

MSAMSum: Towards Benchmarking Multi-lingual Dialogue Summarization
Xiachong Feng, Xiaocheng Feng and Bing Qin

11:55 - 12:55   *Poster session*

12:55 - 14:00   *Lunch break*

14:00 - 14:35   *Invited talk III by Zhou Yu*

15:05 - 14:35   *Paper presentation*

Low-Resource Adaptation of Open-Domain Generative Chatbots
Greyson Gerhard-Young, Raviteja Anantha, Srinivas Chappidi and Bjorn Hoffmeister

Task2Dial: A Novel Task and Dataset for Commonsense-enhanced Task-based Dialogue Grounded in Documents
Carl Strathearn and Dimitra Gkatzia

15:05 - 15:20   *Coffee break*

15:20 - 15:35   *DialDoc 2022 Shared Task*

15:35 - 15:50   *Shared Task Prizes and Best Paper Awards presented by Luis Lastras*

15:50 - 16:25   *Invited talk IV by Michel Galley*

16:25 - 17:00   *Invited talk V by Mari Ostendorf*

17:00 - 17:05   *Ending Remark*

Thursday, May 26, 2022 (continued)