

Tiancheng Zhao (Tony)

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EDUCATION

Carnegie Mellon University

Ph.D. in Language and Information Technology

2016 – present

- Cumulative GPA: 4.05/4.3
- Advised by Prof. Maxine Eskenazi

Thesis (Proposed):

- Learning Generative End-to-end Dialog Systems with Knowledge

Thesis Committee:

- Prof. Maxine Eskenazi (CMU)
- Prof. William Cohen (CMU)
- Prof. Louis-Philippe Morency (CMU)
- Dr. Dilek Hakkani-Tur (Google)

Carnegie Mellon University

Master of Language Technologies (MLT)

2014 – 2016

- Cumulative GPA: 3.94/4.3
- Advised by Prof. Maxine Eskenazi and Prof. Alan Black

University of California, Los Angeles

Bachelor of Science (B.S.) in Electrical Engineering (CS Option)

2010 – 2014

- Graduated with Summa Cum Laude
- Cumulative GPA: 3.87/4.0 Major GPA: 4.0/4.0
- Advised by Prof. Abeer Alwan

RESEARCH AREAS

- End-to-end Dialog Systems
- Deep Generative Model for Natural Language
- Natural Language Processing

PUBLICATIONS

• 2018

- 1) [Tiancheng Zhao](#) and [Maxine Eskenazi](#), Zero-Shot Dialog Generation with Cross-Domain Latent Actions. in *Proceeding of SIGDIAL 2018 Conference* [**Best Paper Award**]
- 2) [Jiaping Zhang](#), [Tiancheng Zhao](#) and [Zhou Yu](#), Multimodal Hierarchical Reinforcement Learning Policy for Task-Oriented Visual Dialog in *Proceeding of SIGDIAL 2018 Conference*
- 3) [Tiancheng Zhao](#), [Kyunsoong Lee](#) and [Maxine Eskenazi](#), Unsupervised Discrete Sentence Representation Learning for Interpretable Neural Dialog Generation in *Proceeding of ACL 2018 Conference* [**Top 3%**]
- 4) [Kyunsoong Lee](#), [Tiancheng Zhao](#), [Alan W Black](#), and [Maxine Eskenazi](#), DialCrowd: A toolkit for easy dialog system assessment. in *Proceeding of SIGDIAL 2018 Conference*,
- 5) [Zhiting Hu](#), [Zichao Yang](#), [Tiancheng Zhao](#), [Haoran Shi](#), [Junxian He](#), [Di Wang](#), [Xuezhe Ma](#), [Zhengzhong Liu](#), [Xiaodan Liang](#), [Lianhui Qin](#), [Devendra Singh Chaplot](#), [Bowen Tan](#), [Xingjiang Yu](#), [Eric Xing](#) [Texar](#): A Modularized, Versatile, and Extensible Toolbox for Text Generation. in *Proceeding of ACL 2018 Workshop for NLP Open Source Software (NLPOSS)*,

• 2017

- 1) [Tiancheng Zhao](#) [Allen Lu](#), [Kyunsoong Lee](#) and [Maxine Eskenazi](#), Generative Encoder-Decoder Models for Task-Oriented Spoken Dialog Systems with Chatting Capability. in *Proceeding of SIGDIAL 2017 Conference*,
- 2) [Kyunsoong Lee](#), [Tiancheng Zhao](#), [Yulun Du](#), [Edward Cai](#), [Allen Lu](#), [Eli Pincus](#), [David Traum](#), [Stefan Ultes](#), [Lina M Rojas Barahona](#), [Milica Gasic](#), [Steve Young](#), [Maxine Eskenazi](#), DialPort, Gone Live: An Update After A Year of Development. in *Proceedings of the SIGDIAL 2017 Conference*,
- 3) [Tiancheng Zhao](#) [Kyunsoong Lee](#) and [Maxine Eskenazi](#), Learning Discourse-level Diversity for Neural Dialog Models using Conditional Variational Autoencoders. in *Proceeding of 2017 Annual Meeting of the Association for Computational Linguistics*,

- 4) Tiancheng Zhao Kyusong Lee and Maxine Eskenazi, An Assessment Framework for DialPort. in *Proceeding of 2017 IWSDS Workshop*,
 - **2016**
- 1) Kyusong Lee, Tiancheng Zhao, Stefan Ultes, Lina Rojas-Barahona, Eli Pincus, David Traum, Maxine Eskenazi, DialPort: Connecting the Spoken Dialog Research Community to Real User Data. in *Proceeding of 2016 IEEE Workshop on Spoken Language Technology*,
- 2) Tiancheng Zhao Kyusong Lee and Maxine Eskenazi, Dialport: A general framework for aggregating dialog systems. in *Proceedings of 2016 the Workshop on Uphill Battles in Language Processing at EMNLP*,
- 3) Tiancheng Zhao and Maxine Eskenazi, Towards end-to-end learning for dialog state tracking and management using deep reinforcement learning. in *Proceedings of the SIGDIAL 2016 Conference*, [**Best Paper Nomination top 1%**]
- 4) Maxine Eskenazi, Sungjin Lee, Tiancheng Zhao, Ting Yao Hu, Alan W Black, Unconventional Approaches to Gathering and Sharing Resources for Spoken Dialog Research. in *in Proceedings of the LREC 2016 Workshop*,
- **2015**
- 1) Andrew Wilkinson, Tiancheng Zhao, Alan W Black, Deriving Phonetic Transcriptions and Discovering Word Segmentations for Speech-to-Speech Translation in Low-Resource Settings in *Proceedings of the SIGDIAL 2015 Conference*.
- 2) Tiancheng Zhao, Alan W Black, and Maxine Eskenazi, An Incremental Turn-Taking Model with Active System Barge-in for Spoken Dialog System, in *Proceedings of the SIGDIAL 2015 Conference*.
- 3) Tiancheng Zhao and Maxine Eskenazi, Human-System turn taking analysis for the let's go bus information system. *The Meeting of the Acoustical Society of America, Pittsburgh, 2015*.

**RESEARCH
EXPERIENCE**

Dialog Research Center (DIALRC), CMU

Graduate Research Assistant

Aug 2014 – Present

- Advisors: Maxine Eskenazi and Alan W Black
- End-to-end dialog modeling
- Multi-domain statistical dialog management
- Turn-taking in spoken dialog system
- DialPort: World's first academic dialog aggregation system platform

Speech Processing and Auditory Perception Lab (SPAPL), UCLA

Undergraduate Research Assistant

Mar 2014 – Jun 2014

- Advisor: Abeer Alwan
- Speaker identification under noisy conditions
- Speech activity detection under noisy conditions

Parallel Data Group, UCLA

Undergraduate Research Assistant

Sep 2013 – Dec 2013

- Used convex optimization techniques to optimize the global area and power of a bio-medical device.
- Designed and Implemented simulation and optimization tools for 2-stage Low Noise Amplifier.

**PROFESSIONAL
ACTIVITIES**

Empirical Methods in Natural Language Processing (EMNLP 2018)

Jul 2018

Program Committee and Reviewer

Annual Meeting of the Association for Computational Linguistics (ACL 2018)

May 2018

Program Committee and Reviewer

Young Research Roundtable on Dialog System (YRRSDS 2016-2018)

2016 – 2018

Organizing Committee and Reviewer

Dialog State Tracking Challenge (DSTC 6)

Nov 2017

Program Committee and Reviewer

International Workshop on Spoken Dialog System Technology (IWSDS 2017)

May 2017

Scientific Program Committee, Webmaster, Student Organizer and Reviewer

Acoustical Society of America at Pittsburgh (ASA 2015) May 2015
Reviewer

Symantec Corporation Summer 2015
Software engineer intern in iOS team

- Proposed and designed a machine-learning algorithm to learn user behavior for better user experience.
- Designed and implemented the encryption module of a credit card management iOS app.
- Improved the user interface of the app and received applause from all managers and UI designers in the team.

SPAPL, UCLA 2012 – 2014
Programmer

- Implemented a height estimation algorithm based on MFCC feature extraction and GMM maximum likelihood function on iOS platform for future crowd sourcing.
- Implemented several Matlab programs for lab experiments and data collecting.

**TEACHING
ACTIVITIES**

Graduate Teaching Assistant Spring 2018
Machine Learning Department, Carnegie Mellon University

- Deep Reinforcement Learning 10-703

Graduate Teaching Assistant Fall 2017
Machine Learning Department, Carnegie Mellon University

- Deep Learning 10-707

**ACADEMIC
HONORS
& AWARDS**

SIGDIAL Best Paper Award 2018

- 2 papers are awarded with the best paper award out of the entire SIGIDAL conference, the top international conference in the field of spoken dialog system.

SIGDIAL Best Paper Nomination Award 2016

- 4 papers are awarded with the best paper nomination award out of the entire SIGIDAL conference, the top international conference in the field of spoken dialog system.

Siebel Scholars Nomination 2015

- Nominee ranks within the top 10% of his/her class based on academic results and has a track record of distinguished research
- Nominee demonstrates excellence in terms of leadership qualities, in the school community and/or in experience prior to graduate program

Outstanding Bachelor of Science Award, Electrical Engineering Department Class of 2014

- The department-wide outstanding Bachelor of Science Award recognizes *one* exceptional student who has demonstrated the highest accomplishments in the classroom, research, and in community service.

Dean's List, School of Engineering, UCLA 2010 – 2014

- For attaining a quarter GPA of at least 3.7

REFERENCES

Professor Maxine Eskenazi School of Computer Science, Carnegie Mellon University
max+@cs.cmu.edu

Professor Alan W Black School of Computer Science, Carnegie Mellon University
awb@cs.cmu.edu

Professor Abeer Alwan Electrical Engineering, University of California, Los Angeles
alwan@ee.ucla.edu

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