

Hyundong Justin Cho *Ph.D. candidate in Computer Science*

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EDUCATION

University of Southern California, Information Sciences Institute (USC ISI)

Ph.D. in Computer Science, Viterbi School of Engineering

Advisor: Prof. [Jonathan May](#)

Machine Learning, Natural Language Processing

2020.9 - Present
Los Angeles, CA, USA

Hong Kong University of Science and Technology (HKUST)

B.Eng. in Computer Science, School of Engineering

Graduated with First Class Honors

2013.9 - 2019.6
Hong Kong, HK

PREPRINTS

1. [Speechworthy Instruction-tuned Language Models](#)
Hyundong Cho, N. Jedema, L. Ribeiro, K. Sharma, P. Szekely, A. Moschitti, R. Janssen, J. May. 2024
arxiv, under review
2. [Can Language Model Moderators Improve the Health of Online Discourse?](#)
Hyundong Cho, S. Liu, T. Shi, D. Jain, B. Rizk, Y. Huang, Z. Lu, N. Wen, J. Gratch, E. Ferrara, J. May. 2023
arxiv, under review

PUBLICATIONS

1. [Continual Dialogue State Tracking via Example-Guided Question Answering](#)
Hyundong Cho, A. Madotto, Z. Lin, K. Raghavi Chandu, S. Kottur, J. Xu, J. May, C. Sankar
in Proceedings of EMNLP 2023
2. [Analyzing Norm Violations in Live-Stream Chat](#)
J. Moon, D. Lee, **Hyundong Cho**, W. Jin, C. Park, M. Kim, J. May, Jay Pujara, S. Park
in Proceedings of EMNLP 2023
3. [RECAP: Retrieval-Enhanced Context-Aware Prefix Encoder for Personalized Dialogue Response Generation](#)
S. Liu, **Hyundong Cho**, M. Freedman, X. Ma, J. May. 2023,
in Proceedings of ACL 2023
4. [Know Thy Strengths: Comprehensive Dialogue State Tracking Diagnostics](#)
Hyundong Cho, C. Sankar, C. Lin, A. Celikyilmaz, S. Shayandeh, J. May, A. Beirami.
in Proceedings of EMNLP 2022 Findings
5. [Reflect, Not Reflex: Inference-Based Common Ground Improves Dialogue Response Quality](#)
P. Zhou, **Hyundong Cho**, P. Jandaghi, D. Lee, Y. Lin, J. Pujara, X. Ren.
in Proceedings of EMNLP 2022
6. [Probing Commonsense Explanation in Dialogue Response Generation](#)
P. Zhou, P. Jandaghi, **Hyundong Cho**, Y. Lin, J. Pujara, X. Ren.
in Proceedings of EMNLP 2021 Findings
7. [Viola: A Topic Agnostic Generate-and-Rank Dialogue System](#)
Hyundong Cho, B. Shbita, K. Shenoy, S. Liu, N. Patel, H. Pindikanti, J. Lee, J. May. 2021
Alexa Prize Socialbot Grand Challenge 4 Proceedings
8. [Agenda Pushing in Email to Thwart Phishing](#)
Hyundong Cho, G. Bartlett, M. Freedman.
in Proceedings of ACL 2021 Doc2Dial Workshop
9. [Grounding Conversations with Improvised Dialogues](#)
Hyundong Cho, J. May.
in Proceedings of ACL 2020

WORK EXPERIENCE

Amazon Alexa

2023.6 - 2023.9

Research Intern, *Graphiq*. Manager: Ruben Janssen

Santa Barbara, CA, USA

- Adapted large language models to generate voice-suitable responses with reinforcement learning from human feedback using proximal policy optimization and 20K preference annotations we collected via audio response comparisons.

Meta AI

2022.6 - 2022.9

Research Intern, *Cognitive AI*. Manager: Dr. Chinnadhurai Sankar

Menlo Park, CA, USA

- Enhanced continual learning performance for dialogue state tracking (DST) with input-output reformulation and retrieval-based in-context fine-tuning and analyzed their effectiveness in reducing catastrophic forgetting.

Meta AI

2021.8 - 2022.3

Research Intern, *Conversational AI Research*. Manager: Dr. Ahmad Beirami

Menlo Park, CA, USA

- Developed a diagnostics toolkit for DST that facilitates holistic comparisons on multiple dimensions of robustness and leveraged the discovery of distinct strengths between span-based classification models and generation models to propose a pre-finetuning method for a more robust DST model.

Stitch Fix Inc.

2020.6 - 2020.8

Data Science Intern. Manager: Dr. Anna Schneider

San Fransisco, CA, USA

- **Customer reviews Summarization:** Surfaced representative client comments to facilitate purchasing decisions for merchandising partners with sentence embeddings and clustering algorithms.

USC ISI Natural Language Group (NLG)

2019.9 - 2020.6

Programmer Analyst, Managers: Prof. Jonathan May, Marjorie Freedman

Los Angeles, CA, USA

- **Active Social Engineering Defense (ASED) program:** Built an automatic phishing email reply system with a finite state transducer and a neural dialogue model. for a Defense Advanced Research Projects Agency (DARPA) program.

Summer Research Intern, PI: Prof. Jonathan May

2019.6 - 2019.9

- **Structure-to-text:** automatically create baseball recap articles from structured data, play-by-play records of Major League Baseball matches on retrosheet.org

Undergraduate Research Assistant, PI: Prof. Jonathan May

2018.9 - 2019.2

- **Improvised dialogues:** Constructed the *Selected Pairs of Learnable Improvisation* (SPOLIN) corpus, a collection of “Yes, and” type dialogue acts from improv podcasts for training more engaging dialogue models. [Project page](#)

Imago.ai

2018.6 - 2018.9

Artificial Intelligence Researcher

Hong Kong, HK

- **Question Answering:** Trained a BiDAF question answering model augmented with self-attention mechanism with MS-MARCO and SQuAD V2 datasets and evaluated performance with BLEU and ROUGE metrics.
- **Production deployment:** Deployed the trained model with a Flask app on the company’s production server.

PROJECTS

Dialogue Agent for Reducing Malicious Acts (DARMA)

2021.12 - 2023.5

- Led the development of dialogue agents that moderate multilingual conversations in social media. PI: Prof. Jonathan May
- Part of *AI Exploration: Civil Sanctuary* program sponsored by DARPA.

Alexa Prize Socialbot Grand Challenge 4

2020.11 - 2021. 6

- Team leader of [Viola](#), the first student-led team to compete from USC. Managed ten PhD, Masters and undergraduate students. Faculty advisor: Professor Jonathan May
- Developed and deployed a scalable and versatile socialbot through AWS with a combination of finite state machines and end-to-end chat neural models and QA components.

Info: News Data Processing for Fake News Detection

2018.9 - 2019.4

- Final Year Project (year-long senior level team project), Supervisor: Kenneth Wai-Ting Leung
- Developed a novel platform for a versatile fake news detection service with a multi-modal fake news detection neural network using PyTorch, Flask, and JavaScript.
- Finalist for Best Final Year Project. [Project link](#)

AWARDS

Viterbi School of Engineering/Graduate School Fellowship for Incoming Students	2020
Academic Excellence Recruitment Scholarship (Full Tuition), HKUST	2013.9 - 2019.6
Reaching Out Award, HKSAR Government Scholarship Fund	2019.2
Champion of CodeIT Suisse Coding Challenge, Credit Suisse APAC Region	2017.9
Dean's List, School of Engineering, HKUST	2013.12, 2015.6, 2017.12, 2018.6, 2019.6

PROFESSIONAL SERVICES

- Program Committee Member (Reviewer)
 - Main conferences: ACL (2021-2023), EMNLP (2020-2023), EACL (2023), AACL (2022-2023), NAACL (2020-2023), NeurIPS (2023)
 - Journals: TMLR (2023, 2024)
 - Workshops: Social Influence in Conversations (ACL 2023), What's left to TEACH chatbots (ICML 2023), Intelligent and Interactive Writing Assistants (ACL 2022), Doc2Dial Workshop (ACL 2021)
- Workshop organizer:
 - What's left to TEACH chatbots Workshop at ICML 2023