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

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EDUCATION

University of Southern California (USC)   **2020.9 - Present**
Ph.D. in Computer Science, Viterbi School of Engineering   *Los Angeles, CA, USA*
Advisor: Prof. Jonathan May
Machine Learning, Natural Language Processing

Hong Kong Unversity of Science and Technology (HKUST)   **2013.9 - 2019.6**
B.Eng. in Computer Science, School of Engineering   *Hong Kong, HK*
Graduated with First Class Honors

PUBLICATIONS

1. Know Thy Strengths: Comprehensive Dialogue State Tracking Diagnostics
   Hyundong Cho, C. Sankar, C. Lin, A. Celikyilmaz, S. Shayandeh, J. May, A. Beirami. 2021
   in Proceedings of EMNLP 2022 Findings

2. 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

3. 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

4. Agenda Pushing in Email to Thwart Phishing
   Hyundong Cho, G. Bartlett, M. Freedman.
   in Proceedings of ACL 2021 Doc2Dial Workshop

5. Grounding Conversations with Improvised Dialogues
   Hyundong Cho, J. May.
   in Proceedings of ACL 2020

OTHERS

1. 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

WORK EXPERIENCE

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 Information Sciences Institute (ISI) Natural Language Group (NLG)   **2019.9 - 2020.6**

Programmer Analyst   *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. The program is sponsored by the Defense Advanced Research Projects Agency (DARPA).

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 *Spontaneanation Pairs of Learnable ImprovisatioN* 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 - Present**
- 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 chit-chat neural models and QA components.

Inflo: 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: EACL2023, AACL2023, ACL2022, EMNLP2022, AACL2022, EMNLP2021, ACL2021, EMNLP2020