

# Takyoung Kim

## Ph.D. Student at the University of Illinois Urbana-Champaign (UIUC)

📍 Thomas M. Siebel Center for Computer Science, 201 North Goodwin Avenue, Urbana, IL 61801

🌐 [youngerous.github.io](https://youngerous.github.io) ✉ [tk30@illinois.edu](mailto:tk30@illinois.edu) in [in/takyoung](https://in.takyoung) ✂ [@takyoung\\_kim](https://twitter.com/takyoung_kim) 🎓 [Google Scholar](https://scholar.google.com/citations?user=...)

## Interests

My research interest lies in Natural Language Processing, Spoken Language Understanding, and Conversational AI. I am particularly interested in developing companion AI systems that can (1) understand social and cognitive context beyond the textual domain, (2) provide personalized and adaptive assistance, and (3) seamlessly interact within the physical world.


## Education

<b>University of Illinois Urbana-Champaign, Urbana, IL, USA</b> <a href="#">📍</a> Doctor of Philosophy, Computer Science Advisor: <a href="#">Dilek Hakkani-Tür</a>	Aug 2024 – Present
<b>Korea University, Seoul, South Korea</b> <a href="#">📍</a> Master of Engineering, Industrial Management Engineering Advisor: <a href="#">Pilsung Kang</a> (currently at Seoul National University) Thesis: <i>Relaxing Unrealistic Assumptions of Dataset and Evaluation Metric in Dialogue State Tracking</i>	Sep 2020 – Aug 2022
<b>Sungkyunkwan University, Seoul, South Korea</b> <a href="#">📍</a> Bachelor of Science in Engineering, Interdisciplinary Program of Convergent Software Bachelor of Media & Communication ( <i>Leave of absence for military service: Feb 2015 - Nov 2016</i> )	Mar 2013 – Aug 2020

## Research Experience

<b>Meta Superintelligence Labs   Voice Modeling Team</b> <a href="#">Menlo Park, CA, USA</a> <a href="#">📍</a> Research Scientist Intern (Mentor: <a href="#">Duc Le</a> )	May 2026 – Aug 2026
<b>Amazon Alexa AI   Conversational Assistant Modeling and Learning</b> <a href="#">Bellevue, WA, USA</a> <a href="#">📍</a> Applied Scientist Intern (Mentors: <a href="#">Jinseok Nam</a> , <a href="#">Chandrayee Basu</a> , <a href="#">Chengyuan Ma</a> ) Worked on error recovery in conversational systems with realistic constraints [2]	May 2025 – Aug 2025
<b>University of Illinois Urbana-Champaign   Conversational AI Lab</b> <a href="#">Urbana, IL, USA</a> <a href="#">📍</a> Graduate Research Assistant (Advisor: <a href="#">Dilek Hakkani-Tür</a> ) Working on cognitive interactions in real-world environments	Aug 2024 – Present
<b>Korea University   Data Science &amp; Business Analytics Lab</b> <a href="#">Seoul, South Korea</a> <a href="#">📍</a> Research Associate (Advisor: <a href="#">Pilsung Kang</a> ) Worked on retrieval-augmented language models specialized in Korean digital media	Apr 2024 – Jul 2024
<b>LG AI Research   Advanced Machine Learning Lab</b> <a href="#">Seoul, South Korea</a> <a href="#">📍</a> Research Scientist Intern (Mentors: <a href="#">Kyungjae Lee</a> , <a href="#">Moontae Lee</a> ) Worked on improving long-form responses of retrieval-augmented language models via planning [6]	Apr 2023 – Mar 2024
<b>NAVER AI Lab   Language Research Team</b> <a href="#">Seongnam, South Korea</a> <a href="#">📍</a> Research Scientist Intern (Mentor: <a href="#">Sungdong Kim</a> ) Worked on revealing innate bias in task-oriented dialogue research via interactive study [7] Worked on constructing safety benchmark for sensitive questions [10] and social biases [9]	Jul 2022 – Jan 2023
<b>Korea University   Data Science &amp; Business Analytics Lab</b> <a href="#">Seoul, South Korea</a> <a href="#">📍</a> Graduate Research Assistant (Advisor: <a href="#">Pilsung Kang</a> ) Undergraduate Intern Worked on analyzing realistic biases and limitations of dialogue state tracking [12, 11, 8] Developed algorithms and pipelines in various domains, such as news [13], car, and ocean waves	Sep 2020 – Jun 2022 Jan 2020 – Aug 2020

## Preprints &amp; Under Review

- [1] **AURA: A Diagnostic Framework for Tracking User Satisfaction of Interactive Planning Agents**   
 Takyoun Kim\*, Janvijay Singh\*, Shuhaib Mehri\*, Emre Can Acikgoz, Sagnik Mukherjee, Nimet Beyza Bozdog, Sumuk Shashidhar, Gokhan Tur, Dilek Hakkani-Tür  
*Workshop on Multi-Turn Interactions in Large Language Models* MTI-LLM, NeurIPS 2025  
*Preprint Under Review*

## Published Papers

- [2] **ReIn: Conversational Error Recovery with Reasoning Inception**   
 Takyoun Kim, Jinseok Nam, Chandrayee Basu, Xing Fan, Chengyuan Ma, Heng Ji, Gokhan Tur, Dilek Hakkani-Tür  
*International Conference on Learning Representations* ICLR 2026
- [3] **Goal Alignment in LLM-Based User Simulators for Conversational AI**   
 Shuhaib Mehri, Xiaocheng Yang, Takyoun Kim, Gokhan Tur, Shikib Mehri, Dilek Hakkani-Tür  
*Transactions of the Association for Computational Linguistics (Oral Presentation at ACL 2026)* TACL 2026
- [4] **TD-EVAL: Revisiting Task-Oriented Dialogue Evaluation by Combining Turn-Level Precision with Dialogue-Level Comparisons**   
 Emre Can Acikgoz\*, Carl Guo\*, Suvodip Dey\*, Akul Datta, Takyoun Kim, Gokhan Tur, Dilek Hakkani-Tür  
*Annual Meeting of the Special Interest Group on Discourse and Dialogue (Oral Presentation)* SIGDIAL 2025
- [5] **Premise-Augmented Reasoning Chains Improve Error Identification in Math Reasoning with LLMs**   
 Sagnik Mukherjee\*, Abhinav Chinta\*, Takyoun Kim, Tarun Anoop Sharma, Dilek Hakkani-Tür  
*International Conference on Machine Learning* ICML 2025
- [6] **Learning to Explore and Select for Coverage-Conditioned Retrieval-Augmented Generation**   
 Takyoun Kim, Kyungjae Lee, Young Rok Jang, Ji Yong Cho, Gangwoo Kim, Minseok Cho, Moontae Lee  
*Nations of the Americas Chapter of the Association for Computational Linguistics* Findings of NAACL 2025
- [7] **Revealing User Familiarity Bias in Task-Oriented Dialogue via Interactive Evaluation**   
 Takyoun Kim, Jamin Shin, Young-Ho Kim, Sanghwan Bae, Sungdong Kim  
*Workshop on NLP for Conversational AI (Oral Presentation, Best Paper Award)* NLP4ConvAI, ACL 2024
- [8] **DSTEA: Improving Dialogue State Tracking via Entity Adaptive Pre-training**   
 Yukyung Lee, Takyoun Kim, Hoonsang Yoon, Pilsung Kang, Junseong Bang, Misuk Kim  
*Knowledge-Based Systems (Q1, Impact Factor: 8.8)* KBS 2024  
*Workshop on Knowledge Augmented Methods for NLP* KnowledgeNLP, KDD 2023
- [9] **KoSBi: A Dataset for Mitigating Social Bias Risks Towards Safer Large Language Model Applications**   
 Hwaran Lee\*, Seokhee Hong\*, Joonsuk Park, Takyoun Kim, Gunhee Kim, Jung-Woo Ha  
*Annual Meeting of the Association for Computational Linguistics (Industry Track)* ACL 2023
- [10] **SQuARE: A Large-Scale Dataset of Sensitive Questions and Acceptable Responses Created Through Human-Machine Collaboration**   
 Hwaran Lee\*, Seokhee Hong\*, Joonsuk Park, Takyoun Kim, Meeyoung Cha, Yejin Choi, Byoungpil Kim, Gunhee Kim, Eun-Ju Lee, Yong Lim, Alice Oh, Sangchul Park, Jung-Woo Ha  
*Annual Meeting of the Association for Computational Linguistics (Oral Presentation, Best Paper Nomination)* ACL 2023
- [11] **Oh My Mistake!: Toward Realistic Dialogue State Tracking including Turnback Utterances**   
 Takyoun Kim, Yukyung Lee, Hoonsang Yoon, Pilsung Kang, Junseong Bang, Misuk Kim  
*Towards Semi-Supervised and Reinforced Task-Oriented Dialog Systems* SereTOD, EMNLP 2022
- [12] **Mismatch between Multi-turn Dialogue and its Evaluation Metric in Dialogue State Tracking**   
 Takyoun Kim, Hoonsang Yoon, Yukyung Lee, Pilsung Kang, Misuk Kim  
*Annual Meeting of the Association for Computational Linguistics (Short)* ACL 2022
- [13] **Building an Integrated Framework of Korean Text Summarization and Text-to-Speech**   
 Takyoun Kim, Jina Kim, Hyeongwon Kang, Subin Kim, Pilsung Kang  
*Journal of Korean Institute of Industrial Engineers* JKIIIE 2022

Presentations and Talks

<b>Data-Driven Approaches to Personalizing Spoken Interaction in Conversational AI</b>	
Seoul National University (Seoul, South Korea), Host: Pilsung Kang	Dec 2025
Hanyang University (Seoul, South Korea), Host: Misuk Kim	Dec 2025
<b>Explainable and Efficient Turn-Taking Strategies for Full-Duplex Conversational AI</b>	
TTIC Summer Workshop on Foundations of Speech and Audio Foundation Models (Chicago, IL, USA)	Sep 2025
<b>Embodied Multi-Agent Planning in Conflicting Scenarios</b>	
Midwest Speech and Language Days (Notre Dame, IN, USA)	Apr 2025

Honors and Awards

<b>CS PhD Fellowship</b>	University of Illinois Urbana-Champaign	Aug 2024 – May 2025
<b>Best Paper Award</b>	ACL 2024 Workshop on NLP for Conversational AI [7]	Aug 2024
<b>Best Student Feedback Award, Research Ideation Competition</b>	Korea University	Feb 2021, Dec 2021
<b>2nd Place (2,500 USD), MyData Acting Hackathon</b>	Ministry of Science and ICT	Oct 2019
<b>Merit-based Scholarship, Computer Science Coursework</b>	Sungkyunkwan University	Spring 2018, Fall 2018

Teaching Experience

<b>CS598 Conversational AI</b>	University of Illinois Urbana-Champaign	Spring 2026
Teaching Assistant (Instructor: Dilek Hakkani-Tür)		
<b>T02459101 Natural Language Processing</b>	Hankuk University of Foreign Studies	Spring 2024
Teaching Assistant (Instructor: Yukyung Lee)		
<b>Industrial Machine Learning</b>	LG Electronics	Spring 2022
Head Teaching Assistant (Instructor: Pilsung Kang)		
<b>Research Mentoring</b>	Hyundai Mobis	Summer 2021
Research Project Assistant (Instructor: Pilsung Kang)		
<b>Industrial Machine Learning and Deep Learning</b>	LG Innotek, SK Hynix	Summer 2021
Teaching Assistant (Instructor: Pilsung Kang)		

Academic Service

<b>Conference Reviewer</b>	
IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)	2026
International Conference on Learning Representations (ICLR)	2026
Asia-Pacific Chapter of the Association for Computational Linguistics (AACL)	2025
Conference on Language Modeling (COLM)	2025 – 2026
Annual Meeting of the Association for Computational Linguistics (ACL)	2025 – 2026
Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL)	2025
European Chapter of the Association for Computational Linguistics (EACL)	2024 – 2026
Empirical Methods in Natural Language Processing (EMNLP)	2023 – 2025
Neural Information Processing Systems (NeurIPS)	2022 – 2025

**Journal Reviewer**

Knowledge-Based Systems

2023 – 2024

**Workshop Reviewer**

Workshop on Multi-Turn Interactions in Large Language Models @ NeurIPS

2025

**Other Reviewer**

ACL Rolling Review (ARR)

2023 – Present

**Organizer**

Midwest Speech and Language Days

2026

**Student Volunteer (On-Site)**

Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL)

2025