Ziwei (Sara) Gong

Ph.D. Candidate · Natural Language Processing · Speech Processing

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Education

Columbia University *August 2022 – July 2027 (Expected)*

Ph.D. in Computer Science; Advisor: Julia Hirschberg

Thesis: Modeling Human Affect and Psychological Dynamics in Interaction.

Barnard College, Columbia University *September 2017 – December 2021*

Bachelor of Arts; Majors: Computer Science and Psychology

Publications

** denotes equal contribution.*

Conference Papers

YUE-PUB-Speech: A Speech-based Pragmatic Understanding Benchmark for Cantonese
Yajie Wen*, **Ziwei Gong***, Chengyan Wu*, Xiyun Gong, Yun Xue, Julia Hirschberg, Bolei Ma.
Interspeech 2026, Sydney, Australia.

YUE-PUB: A Speech-based Pragmatic Understanding Benchmark for Cantonese
Chengyan Wu*, **Ziwei Gong***, Jinzi Chen*, Yajie Wen, Mengmeng Su, Yun Xue, Bolei Ma.
AACL-IJCNLP 2026, Hengqin, China.

SURE: Synergistic Uncertainty-Aware Reasoning for Multimodal Emotion Recognition in Conversations
Yiqiang Cai*, Chengyan Wu*, Bolei Ma, Bo Chen, Yun Xue, Julia Hirschberg, **Ziwei Gong**.
ICASSP 2026, Barcelona, Spain.

The Mind in the Machine: A Survey of Incorporating Psychological Theories in LLMs
Zizhou Liu*, **Ziwei Gong***, Lin Ai*, Zheng Hui*, Run Chen*, Colin Wayne Leach, Michelle R. Greene, Julia Hirschberg.
EACL 2026, Rabat, Morocco.

Detecting Mental Manipulation in Speech via Synthetic Multi-Speaker Dialogue
Run Chen, Wen Liang, **Ziwei Gong**, Lin Ai, Julia Hirschberg.
IWSDS 2026, Trenton, Italy.

Semi-Occluded Vocal Tract Exercises on YouTube: Content Analysis and Sentiment Analysis
Pinhong Wu, **Ziwei Gong**, Yuchen Huang, Julia Hirschberg, Keith Chadwick.
The 147th Annual Meeting of the American Laryngological Association (ALA), Phoenix, Arizona..

SMARTMiner: Extracting and Evaluating SMART Goals from Low-Resource Health Coaching Notes
Iva Bojic, Qi Chwen Ong, Stephanie Hilary Xinyi Ma, Lin Ai, Zheng Liu, **Ziwei Gong**, Julia Hirschberg, Andy Hau Yan Ho, Andy W. H. Khong.
Findings of EMNLP 2025, Suzhou, China.

Multimodal Emotion Recognition in Conversations: A Survey of Methods, Trends, Challenges and Prospects
Chengyan Wu, Yiqiang Cai, Yang Liu, Pengxu Zhu, Yun Xue, **Ziwei Gong**, Julia Hirschberg, Bolei Ma.
Findings of EMNLP 2025, Suzhou, China.

Learning More with Less: Self-Supervised Approaches for Low-Resource Speech Emotion Recognition
Ziwei Gong, Pengyuan Shi, Kaan Donbekci, Lin Ai, Run Chen, David Sasu, Zehui Wu, Julia Hirschberg.
Interspeech 2025, Rotterdam, The Netherlands.

CREAM: Comparison-Based Reference-Free ELO-Ranked Automatic Evaluation for Meeting Summarization
Ziwei Gong, Lin Ai, Harshsaiprasad Deshpande, Alexander Johnson, Emmy Phung, Zehui Wu, Ahmad Emami, Julia Hirschberg.
Interspeech 2025, Rotterdam, The Netherlands.

Pragmatics in the Era of Large Language Models: A Survey on Datasets, Evaluation, Opportunities and Challenges
Bolei Ma, Yuting Li, Wei Zhou, **Ziwei Gong**, Yang Janet Liu, Katja Jasinskaja, Annemarie Friedrich, Julia Hirschberg, Frauke Kreuter, Barbara Plank.
ACL 2025, Vienna, Austria.

Akan Cinematic Emotions (ACE): A Multimodal Multi-party Dataset for Emotion Recognition in Movie Dialogues
David Sasu, Zehui Wu, **Ziwei Gong**, Run Chen, Pengyuan Shi, Lin Ai, Julia Hirschberg, Natalie Schluter.
Findings of ACL 2025, Vienna, Austria.

Beyond Silent Letters: Amplifying LLMs in Emotion Recognition with Vocal Nuances
Zehui Wu, **Ziwei Gong**, Lin Ai, Pengyuan Shi, Kaan Donbekci, Julia Hirschberg.
Findings of NAACL 2025, Albuquerque, New Mexico.

NovAScore: A New Automated Metric for Evaluating Document Level Novelty
Lin Ai, **Ziwei Gong**, Harshsaiprasad Deshpande, Alexander Johnson, Emmy Phung, Ahmad Emami, Julia Hirschberg.
COLING 2025, Abu Dhabi, UAE.

A Survey on Open Information Extraction from Rule-based Model to Large Language Model
Pai Liu*, Wenyang Gao*, Wenjie Dong*, Lin Ai*, **Ziwei Gong***, Songfang Huang, Zongsheng Li, Ehsan Hoque, Julia Hirschberg, Yue Zhang.
Findings of EMNLP 2024, Miami, FL.

Multimodal Multi-Loss Fusion Network for Sentiment Analysis
Zehui Wu*, **Ziwei Gong***, Jaywon Koo, Julia Hirschberg.
NAACL 2024, Mexico City, Mexico.

Workshop Papers

A Mapping on Current Classifying Categories of Emotions used in Multimodal Models for Emotion Recognition
Ziwei Gong, Xinyi Hu, Muyin Yao, Xiaoning Zhu, Julia Hirschberg.
18th Linguistic Annotation Workshop, EACL 2024, Malta.

Eliciting Rich Positive Emotions in Dialogue Generation
Ziwei Gong, Qingkai Min, Yue Zhang.
First Workshop on Social Influence in Conversations (SICon), ACL 2023, Toronto, Canada.

Exploring New Methods for Identifying False Information and the Intent Behind It on Social Media: COVID-19 Tweets
Lin Ai, Run Chen, **Ziwei Gong**, Julia Guo, Shayan Hooshmand, Zixiaofan Yang, Julia Hirschberg.
Sixth International Workshop on Social Sensing (SocialSens 2021), ICWSM, Atlanta.

Preprints and Papers Under Review

Empath: Tracing Multi-Level Emotion Dynamics in Crisis Counseling Dialogues
Ziwei Gong*, Yuchen Huang*, Nicholas Deas, Wen Liang, Shana Kleiner, Henry Willis, Melanie Subbiah, Kathleen McKeown, Julia Hirschberg.
Under review, October 2026.

MEDIAT: Multi-Stakeholder, Emotion-Aware Dialogue Management
Ziwei Gong, Yifan Song, Jiateng Liu, Uttaran Bhattacharya, Saayan Mitra, Julia Hirschberg, Victor Bursztyn.
Under review, October 2026.

Right Destination, Wrong Journey: Synthetic Counseling Dialogues Miss Human Interactional Dynamics
Ziwei Gong*, Yuchen Huang*, Nicholas Deas, Melanie Subbiah, Julia Hirschberg.
Under review, September 2026.

E^2Sim: Long-Horizon Simulation of Everyday Human Behavior with Evolving States
Ziwei Gong*, Xiangyang Yin*, Thai Quoc On, Lin Ai, Julia Hirschberg, Haotong Yang.
Under review, September 2026.

Huntington Disease Automatic Speech Recognition with Biomarker Supervision
Charles L Wang, Cady Chen, **Ziwei Gong**, Julia Hirschberg.
Under review, March 2026.

A Survey on Mental Health Datasets and Resources
Ziwei Gong, Chengtao Dai, Bolei Ma, Melody Ma, Manasi Sharma, Thai Quoc On, Medha Morparia, Benjamin Enos, Yuwen Yu, Philip Resnik, Sarah Ita Levitan, Julia Hirschberg.
Under review, January 2026.

CantoASR: Prosody-Aware ASR-LALM Collaboration for Low-Resource Cantonese
Dazhong Chen, Yi-Cheng Lin, Yuchen Huang, **Ziwei Gong**, Di Jiang, Zeying Xie, Yi R. Fung.
Under review, January 2026.

Factuality on Demand: Controlling the Factual-Informative Trade-off in Text Generation
Ziwei Gong*, Yanda Chen*, Julia Hirschberg, Chen Zhao, He He, Zhou Yu, Kathleen McKeown.
arXiv preprint, 2025.

Academic Research Experience

Speech Lab, Columbia University *September 2022 – Present*
Ph.D. Candidate; Advisor: Julia Hirschberg *New York, NY*

Speech Lab, Columbia University *January 2021 – February 2022*
Research Assistant, Project Student; Advisor: Julia Hirschberg *New York, NY*

Text Intelligence Lab, Westlake University *July 2020 – February 2021*
Full-time Research Assistant/Visiting Student; Advisor: Yue Zhang *Hangzhou, China*

Speech Accessibility Project (VoiceNextPage) *September 2019 – June 2020*
Research Assistant, Columbia University; Advisor: David Williams-King *New York, NY*

Industry Research Experience

Adobe Research *May 2026 – August 2026*
Research Scientist Intern *San Jose, CA*
Developed a training-free dialogue control framework for dynamically routing stakeholder policies.

JPMorgan Chase & Co *June 2024 – August 2024*
AI & Data Science Summer Associate Program *New York, NY*
Proposed a comparison-based evaluator for long-context meeting summarization without requiring references.

Amazon.com, Inc. (Amazon Web Services) *February 2022 – August 2022*
Full-time SDE, Deep Learning at AWS *East Palo Alto, CA; hybrid*
Designed and deployed Amazon SageMaker Debugger rules to optimize ML training and identify bottlenecks.

Amazon.com, Inc. (Amazon Web Services) *June 2021 – September 2021*
SDE I Intern, Deep Learning at AWS *East Palo Alto, CA; virtual*
Built and optimized a distributed YOLOv3 object detection model for SageMaker, achieving 40% training speed optimization (170 ms vs. 280 ms).

Grants and Awards

NSF ARNI Research Support (Doctoral Researcher) *2025–2026*
Towards Safe, Robust, Interpretable Dialogue Agents for Democratized Medical Care.

PhD Service Award, Columbia University *2026*
Citadel PhD Travel Fund *2025*
CRA-WP Grad Cohort for Women Travel Fund *2024*
Beyond Barnard GHC Award *2019, 2020*

Teaching

Instructor

COMS 4995 Semantic Representations for NLP *Summer 2025*

Fu Foundation School of Engineering and Applied Science, Columbia University.

Sole instructor for a 3-credit course fulfilling CS graduation requirements (14 students). Designed and taught the course with guidance from Daniel Bauer; developed lectures, assignments, and final projects.

Teaching Assistant

COMS 6998 Advanced Topics in Spoken Language Processing *Spring 2024, Spring 2023*

Computer Science Department, Columbia University.

Graded assignments and supported student coursework.

PSYC BC1101 Statistics *Fall 2018*

Psychology Department, Barnard College.

Led R-based recitations, held office hours, and graded assignments and exams.

Academic Support

Empirical Reasoning Fellow *Fall 2019, Spring 2020*

Empirical Reasoning Center, Barnard College.

Supported students through quantitative-methods office hours in Excel, R, Python, and GIS.

Invited Talks

Modeling Human Affect and Psychological Dynamics in Interaction *November 2026 (Scheduled)*

Advanced Speech Processing Course, Columbia University.

Exploring Cultural Differences in LLMs for Mental Health *September 2026*

CSC Workshop, Barnard College.

NLP+Mental Health *April 2026*

Advanced Speech Processing Course, Columbia University.

Decoding Human Emotions *April 2026*

NLP Seminar, LMU Munich.

Semantic Representations *2025, 2026*

COMS W4705 Natural Language Processing, Columbia University.

Decoding Human Emotions *March 2025*

NLP Seminar, Columbia University.

Emotion Detection *2023–2026*

Advanced Speech Processing Course, Columbia University.

Mentoring

Zehui Wu (MS, Columbia) → 2 NAACL+ 1 Interspeech papers, InstaLILY AI.

Jaywon Koo (MS, Columbia) → NAACL paper; Rice University CS Ph.D..

Pengyuan Shi (MS, Columbia) → Interspeech + NAACL + ACL papers, Uber.

Kaan Donbekci (MS, Columbia) → Interspeech + NAACL papers.

Yuchen Huang (BA, Barnard) → 2 papers under review + ALA 2026 poster, UCLA MS.

Wen Liang (MS, Columbia) → IWSDS paper, Redhat.

Chengtao Dai (MS, Columbia) → paper under review.

Melody Ma (MS, Columbia) → paper under review, Meta Research.

Manasi Sharma (Palo Alto High) → paper under review, Columbia SEAS Undergrad.

David Smythe (MS, Columbia) → Datawise.

Richard Kim (MS, Columbia) → Headline.

Eleanor Lin (BS, Columbia) → University of Michigan CS Ph.D..

Thai Quoc On (MS, Columbia) → paper under review.

Medha Morparia (BA, Barnard) → paper under review.

Benjamin Enos (BA, Boston University) → paper under review.

Cady Chen (BA, Columbia) → Paper under review, Stanford University RA.

Charles Wang (BS, Columbia) → Paper under review.

Service

Reviewing

Reviewer, ACL Rolling Review (ARR) *2024–2026*
ACL, EMNLP, NAACL, EACL, and AACL-IJCNLP.
Reviewer, ICLR *2026*
Reviewer, Linguistic Annotation Workshop (LAW) *2025*
Reviewer, Social Influence in Conversations (SICon) *2025*
Reviewer, Transactions on Affective Computing

Organizing

Organizer, The User, Plural *May 2027 (Upcoming)*
Heterogeneity and Interaction in User Simulation.
Workshop, COLING 2027, Macau, China.

Organizer, BoF on User Simulation *July 2026*
Birds-of-a-feather Session, Association for Computational Linguistics (ACL) conference, San Diego, CA.

Department and Community

Reviewer, Pre-application Review for underrepresented candidates, Columbia University *2023*

CS Panel for Prospective Students, Barnard College *2025, 2026*

Member, Psi Chi, International Honor Society in Psychology *Since August 2020*

ML Mentor, Mental Health × AI Hackathon, Columbia University *Spring 2025*

Mentor, Undergraduate Mentoring Program, Women In Science at Columbia University *Spring 2023*