

Run Chen

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Education

- Sept. 2020 - present **Columbia University**, New York, NY.
Candidate for PhD in *Computer Science*.
Advisor: Julia Hirschberg.
- Sept. 2019 - May 2020 **Massachusetts Institute of Technology (MIT)**, Cambridge, MA.
Master of Engineering in *Computer Science and Molecular Biology*.
- Sept. 2015 - Jun. 2019 **Massachusetts Institute of Technology (MIT)**, Cambridge, MA.
Bachelor of Science in *Linguistics and Philosophy*, and in *Computer Science and Molecular Biology*.

Research and Work Experience

- Sept. 2020 - present **Research Assistant**, *Columbia University Spoken Language Processing Group*, New York, NY
- DARPA CCU project: collected and annotated data for cross-cultural emotional understanding, built models for identifying entrainment and empathy
 - DARPA SemaFor project: collected a dataset of sarcastic Twitter posts on COVID-19 related topics; built sarcasm detection BERT models to identify sarcastic intent behind social media content
- May 2022 - Aug. 2022 **Applied Scientist Intern** *Amazon Alexa AI*, remote in New York, NY
- Built models for identifying entrainment behaviors between users and agents
 - Analyzed entrainment levels in task-oriented and chit chat dialogs
 - Extracted accoutic-prosodic features from the DSTC-10 Task 1 corpus
- May 2021 - Sept. 2021 **Applied Scientist Intern** *Amazon Alexa AI*, remote in New York, NY
- Built dialog act classification BERT models using both text and speech features
 - Extracted Parselmouth and OpenSMILE features from the Switchboard corpus
 - Designed dialog act schema and annotated dialog acts on a development set for a newly collected speech corpus of task-oriented conversations.
- Mar. 2019 - May 2020 **Research Assistant**, *MIT Laboratory for Information and Decision Systems (LIDS)*, Cambridge, MA
- Analyzed adjectives and adverbs from Google Books Ngram to test the cartography theory; designed evaluation metrics for the performance of clustering; extracted semantic categories from WordNet
- Sept. 2019 - May 2020 **Lab Assistant**, *MIT Department of Electrical Engineering and Computer Science*, Cambridge, MA,
- Taught lab sessions for undergraduate machine learning class of 300 students
 - Held office hours and answered questions on online forum Piazza
- Jul. 2019 - Aug. 2019 **Software Engineer Intern**, *Alibaba Group*, Hangzhou, China
- Applied machine learning for interpreting government services policies and regulations for searching optimization in an online service platform
- Jun. 2016 - May 2018 **Research Assistant**, *MIT Computer Science and Artificial Intelligence Lab (CSAIL)*, Cambridge, MA
- Prepared stimuli and ran experiments to collect eye movement data
 - Extracted and analyzed data for correlation between native languages and fixation parameters
 - Received credits in publication: *Predicting Native Language from Gaze* (Berzak et al., 2017 ACL)

- Apr. 2016 - **Research Assistant**, *MIT Research Lab for Electronics (RLE)*, Cambridge, MA
Jan. 2017 • Annotated sound files with acoustic features and landmarks to extrapolate a formula accounting for systematic sound variations in speech context for machine speech recognition

Publications

- Conference **Chen, R.** Liu, Y., Papangelis, A., Kim, S., Hirschberg, J., Hakkani-Tur, D. (In Review) *Identifying Entrainment in Task-oriented Conversations*. AAIL Conference on Artificial Intelligence, 2023.
- Conference Ai, L., **Chen, R.**, Gong, Z., Guo, J., Hooshmand, S., Yang, Z. Hirschberg, J. (2021, June) *Exploring New Methods for Identifying False Information and the Intent Behind It on Social Media: COVID-19 Tweets*. Sixth International Workshop on Social Sensing (SocialSens 2021), AAIL-ICWSM, Atlanta. a: COVID-19 Tweets. DOI: 10.36190/2021.31
- Thesis **Chen, R.** (2020) *Recovery of adjective hierarchy through unsupervised learning*. [Master's thesis, Massachusetts Institute of Technology.] Retrieved from DSpace@MIT. <http://dspace.mit.edu/handle/1721.1/7582>
- Conference **Chen, R.** (2020). Superiority Effect in Albanian Multiple Wh-movement. *Proceedings of the Linguistic Society of America*, 5(1):623-630. ISSN 2473-8689. DOI: 10.3765/plsa.v5i1.4735.
- Conference Umejima, K., **Chen, R.**, Flynn, S., Sakai, K. L. (2019). Enhanced activations in syntax-related regions for multilinguals while newly acquiring a language. *Neurosci. Res. Suppl.*, 20-08m2-3.
- Conference Umejima, K., Yamada, A., **Chen, R.**, Flynn, S., Sakai, K. L. (2018). Syntax-related networks of newly acquiring a language for multilinguals. *Neurosci. Res. Suppl.*, 30-02a1-3.
- Book **Chen, R.** (2014). *Linguistics Olympiad Guide for Beginners (Yu Yan Xue Ru Men Zhi Nan)*. Hangzhou: Zhejiang People's.

Languages and Technical Skills

- Languages Mandarin Chinese, Wu, Japanese, Russian, American Sign Language
Technical Python, Java, \LaTeX , SQL, MATLAB, R, SPSS, EyeLink

Awards and Honors

- 2020-2024 Columbia University Presidential Fellowship (\$94,467)
2015-2019 MIT Gur Tsoo Yuan Scholarship
2017-2019 Eta Kappa Nu National Honor Society Member
2018 MIT SHASS Undergraduate Fund Recipient – Independent Project on Albanian Wh-movement
2017-2018 MIT EECS | CS+HASS Undergraduate Research and Innovation Scholar
NLP Project: Understanding Reading Comprehension of Nonnatives Using Eye-tracking Method
2016-2018 MIT International Science and Technology Initiatives (MISTI) Hayashi Seed Fund Student Researcher
2014 International Linguistics Olympiad, Silver Medal, Team Rank 3rd

Leadership and Activities

- 2017-2018 *Wuming Theater Club*, President, Producer, Designer
2018-2019 Eta Kappa Nu National Honor Society, MIT Chapter Treasurer