

Changye Li

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ACADEMIC APPOINTMENT

2024 - present Postdoctoral Scholar
Department of Biomedical Informatics and Medical Education
University of Washington

EDUCATION

Ph.D. Institute of Health Informatics, University of Minnesota, 2024
M.S. Department of Computer Science and Engineering, University of Minnesota, 2018
B.S. Department of Economics, University of Minnesota, 2016
B.A. School of Statistics, University of Minnesota, 2016

PUBLICATIONS

Journal Articles

- 2024 **Li, C.**, Solinsky, J., Cohen, T., Pakhomov, S., “A curious case of retrogenesis in language: Automated analysis of language patterns observed in dementia patients and young children.” In: *Neuroscience Informatics* 4.1 (2024), p. 100155. ISSN: 2772-5286. DOI: <https://doi.org/10.1016/j.neuri.2023.100155>
- 2024 **Li, C.**, Xu, W., Cohen, T., Pakhomov, S., “Useful blunders: Can automated speech recognition errors improve downstream dementia classification?” In: *Journal of Biomedical Informatics* 150 (2024), p. 104598. ISSN: 1532-0464. DOI: <https://doi.org/10.1016/j.jbi.2024.104598>
- 2022 Pradhan, P., **Li, C.**, Shen, Z., Remucal, M., “Comparison of adverse events between COVID-19 and Flu vaccines.” In: *Public Health Review* 5.1 (2022)
- 2021 Guo, Y., **Li, C.**, Roan, C., Pakhomov, S., Cohen, T., “Crossing the “Cookie Theft” corpus chasm: applying what BERT learns from outside data to the ADReSS challenge dementia detection task.” In: *Frontiers in Computer Science* 3 (2021), p. 642517

Conference Proceedings

- 2024 **Li, C.**, Sheng, Z., Cohen, T., Pakhomov, S., “Too Big to Fail: Larger Language Models are Disproportionately Resilient to Induction of Dementia-Related Linguistic Anomalies.” In: *Findings of the Association for Computational Linguistics ACL 2024*. Ed. by Lun-Wei Ku, Andre Martins, and Vivek Srikumar. Bangkok, Thailand and virtual meeting: Association for Computational Linguistics, Aug. 2024, pp. 6363–6377. URL: <https://aclanthology.org/2024.findings-acl.380>

- 2023 **Li, C.**, Xu, W., Cohen, T., Michalowski, M., Pakhomov, S., “TRESTLE: Toolkit for Reproducible Execution of Speech, Text and Language Experiments.” In: *American Medical Informatics Association Informatics Summit* (2023)
- 2022 **Li, C.**, Knopman, D., Xu, W., Cohen, T., Pakhomov, S., “GPT-D: Inducing Dementia-related Linguistic Anomalies by Deliberate Degradation of Artificial Neural Language Models.” In: *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*. Dublin, Ireland: Association for Computational Linguistics, May 2022, pp. 1866–1877. DOI: 10.18653/v1/2022.acl-long.131

Preprints

- 2024 **Li, C.**, Cohen, T., Pakhomov, S., *Reexamining Racial Disparities in Automatic Speech Recognition Performance: The Role of Confounding by Provenance*. 2024. arXiv: 2407.13982 [cs.CL]. URL: <https://arxiv.org/abs/2407.13982>

CONFERENCE ACTIVITY

Presentation

- 2024 **Li, C.**, Solinsky, J., Michalowski, M., Pakhomov, S., “David (LLaMA) takes on Goliath (GPT-4) in an NLP Task of Extracting Adverse Drug Reactions from DailyMed.” In: *American Medical Informatics Association Informatics Summit* (2024)
- 2023 **Li, C.**, Xu, W., Pakhomov, S., Cohen, T., “Investigating the Impact of Speech Recognition Errors on Subsequent Dementia Classification.” In: *American Medical Informatics Association Informatics Summit* (2023)
- 2023 Xu, W., **Li, C.**, Pakhomov, S., Cohen, T., “Task-agnostic Linguistic Detection of Alzheimer’s Disease Dementia with Time-series Augmented Representations for Detection of Incoherent Speech (TARDIS).” in: *American Medical Informatics Association Informatics Summit* (2023)

Peer-Reviewed Poster

- 2022 **Li, C.**, Cohen, T., Pakhomov, S., “The Far Side of Failure: Investigating the Impact of Speech Recognition Errors on Subsequent Dementia Classification.” In: *Machine Learning for Health* (2022)
- 2018 **Li, C.**, Levonian, Z., Ma, H., Yarosh, S., “Condition Unknown: Predicting Patients’ Health Conditions in an Online Health Community.” In: *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing*. 2018, pp. 281–284

TEACHING

- 2022 Fall Teaching Assistant: Python Programming Essentials for the Health Sciences
- 2021 Fall Teaching Assistant: Foundations of Biomedical Natural Language Processing
- 2022 Fall Introduction to GitHub Workshop
- 2021, 2022 Python Programming Workshop

SERVICE

Academic Journal and Conference Peer Review

Association for Computational Linguistics (ACL) rolling review; International Joint Conference on Artificial Intelligence (IJCAI), AI for Social Good Special Track; European Chapter of the ACL, Computational Linguistics and Clinical Psychology (CLPsych) Workshop; American Medical Informatics Association (AMIA) Informatics Summit; AMIA Annual Summit; Machine Learning for Health (ML4H)

Conference Activity

- 2022 Junior chair, Research Roundtable, Machine Learning for Health
- 2022 Data hackallenge organizer, Association for the Advancement of Artificial Intelligence Conference on Artificial Intelligence (AAAI), International Workshop on Health Intelligence

AWARDS

Awards and Honors

- 2024 Outstanding Student Award, Institute of Health Informatics, University of Minnesota
- 2024 Reviewer Award, AMIA Informatics Summit

PROFESSIONAL EMPLOYMENT

- 2023 Research Intern, Truveta, Bellevue, WA
- 2017 Digital Data Analyst Intern, Padilla, Minneapolis, MN