

Changye Li

Department of Biomedical Informatics and Medical Education
University of Washington

changyel@uw.edu
+1 612-594-1880
changyeli.github.io

ACADEMIC APPOINTMENT

- 2024 - present Postdoctoral Scholar
Department of Biomedical Informatics and Medical Education
University of Washington
- 2024 - present Data Science Postdoctoral Fellow
eScience Institute
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

- 2025 Sheng, Z., Ding, X., Hur, B., **Li, C.**, Cohen, T., Pakhomov, S. V. S., “Mitigating Confounding in Speech-Based Dementia Detection through Weight Masking.” In: *Proceedings of the 63rd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*.

- Ed. by Wanxiang Che, Joyce Nabende, Ekaterina Shutova, and Mohammad Taher Pilehvar. Vienna, Austria: Association for Computational Linguistics, July 2025, pp. 10419–10434. ISBN: 979-8-89176-251-0. URL: <https://aclanthology.org/2025.acl-long.514/>
- 2025 **Li, C.**, Sheng, Z., Cohen, T., Pakhomov, S. V. S., ““Is There Anything Else?”: Examining Administrator Influence on Linguistic Features from the Cookie Theft Picture Description Cognitive Test.” In: *Proceedings of the Workshop on Cognitive Modeling and Computational Linguistics*. Ed. by Tatsuki Kuribayashi, Giulia Rambelli, Ece Takmaz, Philipp Wicke, Jixing Li, and Byung-Doh Oh. Albuquerque, New Mexico, USA: Association for Computational Linguistics, May 2025, pp. 91–103. ISBN: 979-8-89176-227-5. DOI: 10.18653/v1/2025.cmc1-1.15. URL: <https://aclanthology.org/2025.cmc1-1.15/>
- 2025 **Li, C.**, Xu, W., Pakhomov, S., Bradley, E., Ben-Zeev, D., Cohen, T., “Bigger But Not Better: Small Neural Language Models Outperform LLMs in Detection of Thought Disorder.” In: *Proceedings of the 10th Workshop on Computational Linguistics and Clinical Psychology (CLPsych 2025)*. Ed. by Ayah Zirikly, Andrew Yates, Bart Desmet, et al. Albuquerque, New Mexico: Association for Computational Linguistics, May 2025, pp. 90–105. ISBN: 979-8-89176-226-8. DOI: 10.18653/v1/2025.clpsych-1.8. URL: <https://aclanthology.org/2025.clpsych-1.8/>
- 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. DOI: 10.18653/v1/2024.findings-acl.380. 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

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

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>

TEACHING

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

AWARDS

Awards and Honors

2025	Travel Award, Computational Linguistics and Clinical Psychology workshop, NAACL
2024	Outstanding Student Award, Institute of Health Informatics, University of Minnesota
2024	Reviewer Award, AMIA Informatics Summit

SERVICE

Grant Proposal Review

University of Washington, Institute for Medical Data Science, Pilot Awards

Academic Journal Peer Review

Journal of Biomedical Informatics
Computer Speech & Language

Academic Conference Peer Review

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

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, International Workshop on Health Intelligence

PROFESSIONAL EMPLOYMENT

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