Kevin Lybarger, PhD

Assistant Professor
Department of Information Sciences and Technology (IST)
George Mason University
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LybargerLanguageLab.org

Academic Degrees

University of Washington (UW), Seattle, WA
Postdoctoral Fellow in Biomedical Informatics and Medical Education 2020-2022
- Lab: UW BioNLP
- Funding: National Library of Medicine Biomedical Informatics Research Trainee Program
- Advisor: Dr. Meliha Yetisgen

University of Washington, Seattle, WA
PhD in Electrical & Computer Engineering 2014-2020
- Lab: Transformation, Interpretation and Analysis of Language (TIAL)
- Dissertation: *"Extracting information from clinical text with limited annotated data"*
- Advisors: Drs. Mari Ostendorf and Meliha Yetisgen
- Committee: Drs. Shan Liu, Eve Riskin, and Thomas Payne

University of Colorado, Boulder, CO
MS of Electrical Engineering 2005-2007

Seattle University, Seattle, WA
BS of Electrical Engineering 1999-2003

Academic Positions & Affiliations

George Mason University, Fairfax, VA
- *Assistant Professor* — IST 2022-present
- *Affiliate Faculty* — Computer Science 2023-present
- *Core Investigator* — Center for MedTech Innovation (CMI) 2024-present
  Formerly Center for Advancing Systems Science and Bioengineering Innovation (CASSBI)

University of Washington, Seattle, WA
- *Affiliate Assistant Professor* — School of Medicine 2022-present
- *Postdoctoral Fellow* — School of Medicine 2020-2022
- *Research & Teaching Assistant* — Electrical & Computer Engineering 2014-2020

Seattle University, Seattle, WA
- *Adjunct Faculty* 2012-2019

Industry, Consulting, and Summer Positions

DNV KEMA, Seattle, WA
- *Senior Engineer* 2007-2012

National Renewable Energy Laboratory, Golden, CO
- *Graduate Researcher* 2006-2007

Honors, Awards, and Professional Recognitions

Stearns Center for Teaching and Learning, Thank-a-Teacher Recognition 2025
- Nominated by a student in IT 209: Introduction to Object Oriented Programming

Best Colloquia, UW Biomedical Informatics and Medical Education 2021-2022
- Quarter-long colloquia selected based on graduate student voting
- Titled, "Deep Learning and Natural Language Processing Within the Clinical Domain"

Doctoral Dissertation Award Finalist, American Medical Informatics Association 2021
- Recognized for contributions to biomedical informatics (link)
- Dissertation recognized as one of the top six submissions

Best Presentation Award, American Medical Informatics Association 2018
- Presented dissertation research at the NLP Working Group Doctoral Consortium

Husky 100 Recipient, University of Washington 2017
- Recognized for leadership, discovery mindset, and commitment to inclusion
- Selected as one of 100 recipients from students across all UW campuses (0.2% of UW's students)

Professional & Humanitarian Services, Rotary International 2007
- Recognized by Rotary International for work with Engineers Without Borders

Citation Metrics

- **Google Scholar**: h-index = 17, Total Citations = 778 (as of March 2026)
- **ISI (Web of Science)**: h-index = 11, Total Citations = 289 (as of March 2026)

Publications

Book Chapters

Published

1. A. Dmonte, Y. Wang, P. Nakov, H. Li, X. Han, M. Zampieri, **K. Lybarger**, M. Albanese, and T. Baldwin. Creating frameworks and datasets at the intersection of AI safety and elections. In *PROMISE - PROMoting aI's Safe usage for Elections*, pages 115–145. Springer, 2025. doi: 10.1007/978-3-031-89853-2.

2. **K. Lybarger**, Ö. Uzuner, G. K. Ramachandran, H. R. A. Elyazori, M. S. Irbaz, and A. H. M. R. Karim. Natural language processing of clinical data. In *Springer Handbook of Data Engineering*, chapter Part IV Health Data. Springer, 2025 [accepted].

Refereed Journal Papers

Published

3. M. Albanese, X. Ou, **K. Lybarger**, D. Lende, D. Goldgof, F. Al Faisal, K. Banstola, and A. Ghosh. Towards AI-driven human-machine co-teaming for adaptive and agile cyber security operation centers. *ACM Transactions on Internet Technology*, 2026. ISSN 1533-5399. doi: 10.1145/3819819.
4. N. Park, F. Ahmed, **K. Lybarger**, E. Breinhorst, J. Hu, O. Uzuner, M. Gunn, and M. Yetisgen. Automated identification of incidentalomas requiring follow-up: A multi-anatomy evaluation of LLM-based and supervised approaches. *Journal of Biomedical Informatics*, 179:105048, 2026. ISSN 1532-0464. doi: 10.1016/j.jbi.2026.105048.
5. A. B. Kayira†, H. R. A. Elyazori†, **K. Lybarger**, F. Walter, C. Chelala, and G. Funston. Natural language processing of clinical notes for cancer research and patient care prior to widespread adoption of generative ai: Scoping review. *JMIR AI*, 5:e73481, May 2026. doi: 10.2196/73481. *Impact Factor: 3.8 (2025)*
6. S. Khan and **K. Lybarger**. Efficient information extraction using LLMs and knowledge distillation: A study on HPV health communication. *PLOS Digital Health*, 5(3):e0001275, 2026. doi: 10.1371/journal.pdig.0001275. *Impact Factor: 7.7 (2024)*
7. V. Cardenas, **K. Lybarger**, and F. Alemi. Bias in AI-guided management of patients with major depressive disorders. *Journal of Health Equity*, 3(1):2606724, 2026. doi: 10.1080/29944694.2025.2606724. *Impact Factor: not assigned (new journal)*
8. F. Alemi, **K. Lybarger**, J. Vang, Y. Lin, H. R. A. Elyazori, and V. F. Cardenas. Causal networks guiding large language models: Application to COVID-19. *Health Care Management Science*, 28:575–582, 2025. doi: 10.1007/s10729-025-09724-8. *Impact Factor: 2.0 (2024)*
9. Q. S. Zhang, J. Kang, **K. Lybarger**, M. C. Glenn, P. Sponseller, K. H. Blau, and E. Ford. Semi-automated topic identification for radiation oncology safety event reports using natural language processing and statistical modeling. *Medical Physics*, 52(8):e17936, Aug. 2025. doi: 10.1002/mp.17936. *Impact Factor: 3.2 (2024)*
10. J. Tauscher, X. Ding, S. L. Kopelovich, A. Nagendra, **K. Lybarger**, T. A. Cohen, and D. Ben-Zeev. Automated flagging of cognitive biases in the spoken language of people with hallucination experiences. *Journal of Technology in Behavioral Science*, 2025. doi: https://doi.org/10.1007/s41347-025-00551-w. *CiteScore: 5.0*
11. F. Alemi, J. Wojtusiak, A. Ursani, K. P. Eklou, and **K. Lybarger**. Artificial intelligence for management of major depression: Initial design, progress, and research plans. *Alpha Psychiatry*, 26(4):44608, 2025. doi: https://doi.org/10.31083/AP44608. *Impact Factor: 3.5 (2024)*
12. A. Chakraborty, **K. Lybarger**, J. Estebane, J. Chen, M. Patel, V. O'Reilly-Shah, P. Tarczy-Hornoch, M. Yetisgen, and D. Long. Development and evaluation of machine learning models for the identification of surgical site infection in electronic health records. *Surgical Infections*, 26(7):474–481, 2025. doi: 10.1089/sur.2024.266. *Impact Factor: 1.4 (2023)*
13. S. J. Xie, C. Spice, P. Wedgeworth, R. Langevin, **K. Lybarger**, A. Singh, B. R. Wood, J. W. Klein, G. Hsieh, H. C. Duber, and A. L. Hartzler. Patient and clinician acceptability of automated extraction of social drivers of health from clinical notes in primary care. *Journal American Medical Informatics Association*, 32(5):855–865, 2025. doi: 10.1093/jamia/ocaf046. *Impact Factor: 4.7 (2023)*
14. M. M. Rahman, M. S. Irbaz, K. North, M. S. Williams, M. Zampieri, and **K. Lybarger**. Health text simplification: An annotated corpus for digestive cancer education and novel strategies for reinforcement learning. *Journal of Biomedical Informatics*, 158:104727, 2024. doi: 10.1016/j.jbi.2024.104727. *Impact Factor: 4.0 (2024)*

15. Y. V. Fu, G. K. Ramachandran, A. Halwani, B. T. McInnes, F. Xia, **K. Lybarger**, M. Yetisgen, and Ö. Uzuner. CACER: Clinical concept annotations for cancer events and relations. *Journal American Medical Informatics Association*, 31(11):2583–2594, 2024. doi: 10.1093/jamia/ocae231. [free-access link]. *Impact Factor: 4.7 (2024)*
16. N. A. Sathe, S. Xian, F. L. Mabrey, D. R. Crosslin, S. D. Mooney, E. D. Morrell, **K. Lybarger**, M. Yetisgen, G. P. Jarvik, P. K. Bhatraju, et al. Evaluating construct validity of computable acute respiratory distress syndrome definitions in adults hospitalized with COVID-19: an electronic health records based approach. *BMC Pulmonary Medicine*, 23(1):1–10, 2023. doi: 10.1186/s12890-023-02560-y. *Impact Factor: 2.6 (2023)*
17. M. G. Prado, L. G. Kessler, M. A. Au, H. A. Burkhardt, M. Z. Suchsland, et al. Symptoms and signs of lung cancer prior to diagnosis: case-control study using electronic health records from ambulatory care within a large US-based tertiary care centre. *BMJ Open*, 13(4), 2023. doi: 10.1136/bmjopen-2022-068832. *Impact Factor: 2.4 (2023)*
18. **K. Lybarger**, M. Yetisgen, and Ö. Uzuner. The 2022 n2c2/UW shared task on extracting social determinants of health. *Journal American Medical Informatics Association*, 30(8):1367–1378, 2023. doi: 10.1093/jamia/ocad012. [free-access link]. *Impact Factor: 4.7 (2023)*
19. **K. Lybarger**[†], N. J. Dobbins[†], R. Long, A. Singh, P. Wedgeworth, Ö. Uzuner, and M. Yetisgen. Leveraging natural language processing to augment structured social determinants of health data in the electronic health record. *Journal American Medical Informatics Association*, 30(8):1389–1397, 2023. doi: 10.1093/jamia/ocad073. ([†]authors contributed equally). *Impact Factor: 4.7 (2023)*
20. A. L. Hartzler, S. J. Xie, P. Wedgeworth, C. Spice, **K. Lybarger**, et al. Integrating patient voices into the automatic extraction of social determinants of health from clinical records: Ethical considerations and recommendations. *Journal American Medical Informatics Association*, 30(8):1456–1462, 2023. doi: 10.1093/jamia/ocad043. [free-access link]. *Impact Factor: 4.7 (2023)*
21. G. K. Ramachandran, **K. Lybarger**, Y. Liu, D. Mahajan, J. J. Liang, et al. Extracting medication changes in clinical narratives using pre-trained language models. *Journal Biomedical Informatics*, 139:104302, 2023. doi: 10.1016/j.jbi.2023.104302. *Impact Factor: 4.0 (2023)*
22. M. Zigman Suchsland, L. Kowalski, H. A. Burkhardt, M. G. Prado, L. G. Kessler, et al. How timely is diagnosis of lung cancer? cohort study of individuals with lung cancer presenting in ambulatory care in the United States. *Cancers*, 14(23), 2022. doi: 10.3390/cancers14235756. *Impact Factor: 5.2 (2022)*
23. W. Lau, **K. Lybarger**, M. Gunn, and M. Yetisgen. Event-based clinical findings extraction from radiology reports with pre-trained language model. *Journal Digital Imaging*, 2022. doi: 10.1007/s10278-022-00717-5. *Impact Factor: 4.4 (2022)*
24. J. S. Tauscher, **K. Lybarger**, X. Ding, A. Chander, W. J. Hudenko, et al. Automated detection of cognitive distortions in text exchanges between clinicians and people with serious mental illness. *Psychiatric Services*, 2022. doi: 10.1176/appi.ps.202100692. *Impact Factor: 3.8 (2022)*
25. **K. Lybarger**, M. Ostendorf, M. Thompson, and M. Yetisgen. Extracting COVID-19 diagnoses and symptoms from clinical text: A new annotated corpus and neural event extraction framework. *Journal Biomedical Informatics*, 2021. doi: 10.1016/j.jbi.2021.103761. *Impact Factor: 8.0 (2021)*
26. **K. Lybarger**, M. Ostendorf, and M. Yetisgen. Annotating social determinants of health using active learning, and characterizing determinants using neural event extraction. *Journal Biomedical Informatics*, 113:103631, 2021. doi: 10.1016/j.jbi.2020.103631. *Impact Factor: 8.0 (2021)*
27. T. Payne, D. Alonso, A. Markiel, **K. Lybarger**, R. Lordon, et al. Using voice to create inpatient progress notes: effects on note timeliness, quality, and physician satisfaction. *Journal American Medical Association Open*, 1(2):218–226, 2018. doi: 10.1093/jamiaopen/ooy036. *Impact Factor: 4.292 (2018)*
28. **K. Lybarger**, M. Ostendorf, E. Riskin, T. Payne, A. White, et al. Asynchronous speech recognition affects physician editing of notes. *Applied Clinical Informatics*, 9(4):782–790, 2018. doi: 10.1055/s-0038-1673417. *Impact Factor: 1.306 (2018)*
29. T. Payne, D. Alonso, A. Markiel, **K. Lybarger**, and A. White. Using voice to create hospital progress

notes: description of a mobile application and supporting system integrated with a commercial electronic health record. *Journal Biomedical Informatics*, 77:91–96, 2017. doi: 10.1016/j.jbi.2017.12.004. *Impact Factor: 2.882 (2017)*

Under Review

30. F. Alemi, Y. Lin, H. R. A. Elyazori, V. F. Cardenas, N. Ramezani, and **K. Lybarger**. Causal AI reasoning: Direct effects multiplicative inference algorithm. *Journal of Biomedical Informatics*, 2026. doi: 10.2139/ssrn.6537875. Under review.
31. M. T. R. Shawon, M. S. Irbaz, H. R. A. Elyazori, K. R. Resapu, Y. Lin, V. F. Cardenas, F. Alemi, and **K. Lybarger**. Advancing AI trustworthiness through patient simulation: Risk assessment of conversational agents for antidepressant selection. *ACM Transactions on Computing for Healthcare*, 2026. Under review.
32. K. R. Resapu, V. F. Cardenas, Y. Lin, A. Ursani, K. P. Eklou, **K. Lybarger**, and F. Alemi. AI's role in addressing addiction by primary care providers. *Journal of Addiction Medicine*, 2025. Rejected.
33. F. Alemi, K. Resapu, **K. Lybarger**, and V. Cardenas. Data-driven selection of antidepressants: External validation of predictive AI models. *Journal of Affective Disorders*, 2025. Under review.

Refereed Conference Papers

Published

34. S. Khan, S. Hong, J. Wu, **K. Lybarger**, Y. Yin, E. Babinsky, and D. Liu. DF-RAG: Query-aware diversity for retrieval-augmented generation. In V. Demberg, K. Inui, and L. Marquez, editors, *Findings of the Association for Computational Linguistics: EACL*, pages 2873–2894. Association for Computational Linguistics, Mar. 2026. https://aclanthology.org/2026.findings-eacl.150/. *Acceptance Rate: 16.1%*
35. N. Park, G. K. Ramachandran, **K. Lybarger**, F. Xia, Ö. Uzuner, M. Yetisgen, and M. Gunn. Identifying imaging follow-up in radiology reports: A comparative analysis of traditional ML and LLM approaches. In *Proceedings of Joint International Conference on Computational Linguistics, Language Resources and Evaluation*, 2026 [accepted].
36. M. M. Rahman and **K. Lybarger**. Evaluating health question answering under readability-controlled style perturbations. In *Proceedings of Workshop on Text Simplification, Accessibility and Readability (TSAR)*, pages 70–86. Association for Computational Linguistics, Nov. 2025. doi: 10.18653/v1/2025.tsar-1.5.
37. H. R. A. Elyazori, R. Abdulrazzaq, H. Al Shawi, I. P. E. Amouzou, P. King, S. Manns, M. Popal, Z. N. Patel, S. DeStefano, J. Shah, N. L. Gerber, S. Sikdar, S. Lee, S. Acuna, and **K. Lybarger**. Capturing patients' lived experiences with chronic pain through motivational interviewing and information extraction. In *Proceedings of the Workshop on Computational Linguistics for Health (CL4Health) at NAACL*. Association for Computational Linguistics, 2025. doi: 10.18653/v1/2025.cl4health-1.28.
38. Y. V. Fu, G. K. Ramachandran, N. Park, **K. Lybarger**, F. Xia, O. Uzuner, and M. Yetisgen. BioMistral-NLU: Towards more generalizable medical language understanding through instruction tuning. In *AMIA Informatics Summit*, 2024 **[accepted]**.
39. A. Dmonte, M. Zampieri, **K. Lybarger**, M. Albanese, and G. Coulter. Classifying human-generated and AI-generated election claims in social media. In *Proceedings of International Conference on Security and Cryptography*, pages 237–248. INSTICC, SciTePress, 2024. ISBN 978-989-758-709-2. doi: 10.5220/0012797900003767. *Acceptance Rate: 16.5% for full papers (2024)*
40. Y. Fu, G. K. Ramachandran, N. J. Dobbins, N. Park, M. Leu, A. R. Rosenberg, **K. Lybarger**, F. Xia, Ö. Uzuner, and M. Yetisgen. Extracting social determinants of health from pediatric patient notes using large language models: Novel corpus and methods. In *Proceedings of Joint International Conference on Computational Linguistics, Language Resources and Evaluation*, pages 7045–7056, Torino, Italia, May 2024. ELRA and ICCL. https://aclanthology.org/2024.lrec-main.618. **[outstanding paper**

award]. *Acceptance rate: 52% (2024)*

41. N. Park[†], **K. Lybarger**[†], G. K. Ramachandran, S. Lewis, A. Damani, Ö. Uzuner, M. Gunn, and M. Yetisgen. A novel corpus of annotated medical imaging reports and information extraction results using BERT-based language models. In *Proceedings of Joint International Conference on Computational Linguistics, Language Resources and Evaluation*, pages 1280–1292, Torino, Italia, May 2024. ELRA and ICCL. https://aclanthology.org/2024.lrec-main.115 ([†]authors contributed equally). *Acceptance rate: 52% (2024)*
42. B. Han, H. Zhu, S. Zhou, S. Ahmed, M. M. Rahman, F. Xia, and **K. Lybarger**. HuskyScribe at MEDIQA-Sum 2023: Summarizing clinical dialogues with transformers. In *Conference and Labs of the Evaluation Forum*, 2023. https://ceur-ws.org/Vol-3497/paper-124.pdf.
43. G. K. Ramachandran, H. Gangavarapu, **K. Lybarger**, and Ö. Uzuner. MasonNLP+ at SemEval-2023 task 8: Extracting medical questions, experiences and claims from social media using knowledge-augmented pre-trained language models. In *International Workshop on Semantic Evaluation*, 2023. doi: 10.18653/v1/2023.semeval-1.296.
44. G. K. Ramachandran, Y. Fu, B. Han, **K. Lybarger**, N. J. Dobbins, Ö. Uzuner, and M. Yetisgen. Prompt-based extraction of social determinants of health using few-shot learning. In *ACL Clinical Natural Language Processing Workshop*, 2023. https://aclanthology.org/2023.clinicalnlp-1.41.
45. S. Zhou, **K. Lybarger**, M. Yetisgen, and M. Ostendorf. Generalizing through forgetting - domain generalization for symptom event extraction in clinical notes. In *AMIA Informatics Summit*, 2023. PMID: 37350923.
46. **K. Lybarger**, J. S. Tauscher, X. Ding, D. Ben-Zeev, and T. Cohen. Identifying distorted thinking in patient-therapist text message exchanges by leveraging dynamic multi-turn context. In *Proceedings on Computational Linguistics and Clinical Psychology*, pages 126–136, 2022. doi: 10.18653/v1/2022.clpsych-1.11.
47. X. Ding, **K. Lybarger**, J. Tauscher, and T. Cohen. Improving classification of infrequent cognitive distortions: Domain-specific model vs. data augmentation. In *Proceedings of the NAACL Student Research Workshop*, pages 68–75, 2022. doi: 10.18653/v1/2022.naacl-srw.9.
48. **K. Lybarger**, A. Damani, M. Gunn, Ö. Uzuner, and M. Yetisgen. Extracting radiological findings with normalized anatomical information using a span-based BERT relation extraction model. In *AMIA Informatics Summit*, 2022. PMID: 35854739. **[student paper competition finalist]**
49. **K. Lybarger**, L. Mabrey, M. Thau, P. K. Bhatraju, M. Wurfel, and M. Yetisgen. Identifying ARDS using the hierarchical attention network with sentence objectives framework. In *AMIA Annual Symposium Proceedings*, 2021. PMID: 35308902.
50. **K. Lybarger**, M. Yetisgen, and M. Ostendorf. Using neural multi-task learning to extract substance abuse information from clinical notes. In *AMIA Annual Symposium Proceedings*, pages 1395–1404, 2018. PMID: 30815184.
51. **K. Lybarger**, M. Ostendorf, and M. Yetisgen. Automatically detecting likely edits in clinical notes created using automatic speech recognition. In *AMIA Annual Symposium Proceedings*, pages 1186–1195, 2017. PMID: 29854187.
52. B. Aazhang, R. Abler, J. Allebach, L. Bost, J. Cavallaro, et al. Vertically Integrated Projects (VIP) programs: multidisciplinary projects with homes in any discipline. In *ASEE Annual Conference and Exposition*, 2017. Available at https://www.asee.org/public/conferences/78/papers/19405/view.
53. D. Malcolm, **K. Lybarger**, and G. Randall. Advances in wind turbine site assessment. In *AIAA Aerospace Sciences Meeting*, page 456, 2011. doi: 10.2514/6.2011-456.

Under Review

54. H. R. A. Elyazori, R. Abdulrazzaq, A. L. Mitchell, B. Nguyen, S. Sreedevi-Naresh, S. E. Krafsig, T. H. Rossi, J. Shah, L. H. Gerber, S. DeStefano, S. Sikdar, S. Acuña, and **K. Lybarger**. ACES: Anchored

coordination and effective semantics for annotation in ambiguous domains. In *Proceedings of the Association for Computational Linguistics*, 2026. Under review.

55. M. M. Rahman, T. Rohde, R. Tripathi, K. Elkhalil, and **K. Lybarger**. ATTCK-R: Knowledge-aware long-horizon jailbreaking for protected llms. In *Proceedings of the Association for Computational Linguistics*, 2026. Under review.

Non-Refereed Journal Publications

Published

56. H. R. A. Elyazori, T. Thurman, **K. Lybarger**, and F. S. Taxman. Exploring probation and parole records using natural language processing: A case study of supervisory condition notes. *Federal Probation*, 87(3), 2023. https://www.uscourts.gov/federal-probation-journal/2023/12/exploring-probation-and-parole-records-using-natural-language.
57. **K. Lybarger**, O. J. Bear Don't Walk IV, M. Yetisgen, and Ö. Uzuner. Advancements in extracting social determinants of health information from narrative text. *Journal American Medical Informatics Association*, 2023. doi: 10.1093/jamia/ocad121 **[editorial]**.

Abstracts and Posters

58. R. Abdulrazzaq, H. R. A. Elyazori, S. Krafsig, A. Mitchell, B. Nguyen, T. Rossi, S. Sreedevi-naresh, S. Acuna, and **K. Lybarger**. Extracting biopsychosocial insights from motivational interview transcripts on chronic pain using natural language processing. In *National Conference on Undergraduate Research (NCUR)*, Richmond, VA, Apr. 2026. Poster presentation [accepted].
59. R. Abdulrazzaq, H. R. A. Elyazori, S. Krafsig, A. Mitchell, B. Nguyen, T. Rossi, S. Sreedevi-naresh, S. Acuna, and **K. Lybarger**. Capturing the lived experiences of individuals with chronic pain through motivational interviewing. In *National Conference on Undergraduate Research (NCUR)*, Richmond, VA, Apr. 2026. Poster presentation [accepted].
60. K. R. Resapu, F. Alemi, **K. Lybarger**, and V. F. Cardenas. Evaluating the effectiveness of AI-powered antidepressant recommendations personalizing depression care. In *American Public Health Association Annual Meeting & Expo*, Fairfax, VA, 2025. American Public Health Association.
61. R. Abdulrazzaq, H. Al Shawi, P. King, S. Manns, I. P. E. Amouzou, M. Popal, **K. Lybarger**, and S. Acuña. Capturing lived experiences of chronic pain through a listening experience model. In *National Conference on Undergraduate Research*, 2025. https://ncur.secure-platform.com/2025/gallery/rounds/30/details/29730.
62. Q. Zhang, J. Kang, **K. Lybarger**, M. Glenn, P. Sponseller, K. Blau, and E. Ford. Semi-automated topic identification for radiation oncology safety event reports using natural language processing and statistical models. In *Annual Meeting of the American Society for Radiation Oncology*, 2025.
63. R. Abdulrazzaq, H. Al Shawi, P. King, S. Manns, I. P. E. Amouzou, M. Popal, **K. Lybarger**, and S. Acuña. Capturing lived experiences of chronic pain through a listening experience model. In *Biomedical Engineering Society Annual Meeting*, 2024. [poster] .
64. M. S. Irbaz, M. M. Rahman, K. Scafide, D. Lattanzi, J. Wojtusiak, and **K. Lybarger**. Optical character recognition for information extraction from handwritten assault and violence reports. In *AMIA Symposium Workshop: Using Data Science and AI to Advance Violence and Injury Prevention*, 2024. [poster] Submitted 10/15/24.
65. Q. S. Zhang, J. Kang, **K. Lybarger**, M. C. Glenn, P. Sponseller, K. H. Blau, and E. Ford. Semi-automated topic identification for radiation oncology safety event reports using natural language processing and statistical modeling. *International Journal of Radiation Oncology, Biology, Physics*, 2024. doi: 10.1016/j.ijrobp.2024.07.1467.

66. M. M. Rahman, M. S. Irbaz, K. North, M. S. Williams, M. Zampieri, and **K. Lybarger**. Health text simplification: An annotated corpus for digestive cancer education & novel strategies for reinforcement learning. In *National Cancer Institute Junior Investigator Meeting*, 2024. [poster]
67. F. Alemi, **K. Lybarger**, N. Ramezani, V. F. Cardenas, and R. C. King. Removed algorithm bias in selection of antidepressants. In *AI for Health Equity Symposium AIM-AHEAD Annual Meeting*, 2024. [poster]
68. A. Dmonte, M. Zampieri, **K. Lybarger**, and M. Albanese. Modeling election-related claims in social media in the age of LLMs. In *Commonwealth Cyber Initiative (CCI) Symposium*, 2024. https://cyberinitiative.org/events-programs/2024/cci-symposium-2024/symposium-2024-paper-presentation-schedule.html [poster]
69. **K. Lybarger**, N. Park, S. Zhou, A. Damani, A. White, and J. K. Gill. A corpus of radiology reports from multiple imaging modalities with fine-grained event-based annotations. In *AMIA Annual Symposium Proceedings*, 2022.
70. **K. Lybarger**, E. Qiao, and M. Yetisgen. An exploration of information extraction models on transcribed patient visits. In *AMIA Annual Symposium Proceedings*, 2021. [poster].
71. A. Chakraborty, **K. Lybarger**, D. Long, V. N. O'Reilly-Shah, and M. Yetisgen. Automatic detection of surgical site infections using EHR data. In *AMIA Annual Symposium Proceedings*, 2021. [poster].
72. **K. Lybarger**, E. Chang, K. Kerker, J. Shen, E. Qiao, et al. A novel corpus with detailed annotations of social determinants of health. In *AMIA Annual Symposium Proceedings*, 2020.
73. **K. Lybarger**, N. Dobbins, M. Ostendorf, M. Thompson, and M. Yetisgen. Extracting COVID-19 diagnoses and symptoms from clinical text. In *AMIA NLP Working Group*, 2020.
74. **K. Lybarger**, M. Ostendorf, Ö. Uzuner, and M. Yetisgen. Automatic identification of social determinants of health from clinical records. In *AMIA Annual Symposium Proceedings*, 2019.
75. **K. Lybarger**. Extracting social behavioral factors from free-text clinical notes. In *AMIA NLP Working Group*, 2018.
76. T. Payne, A. Markiel, D. Alonso, R. Lordon, **K. Lybarger**, et al. Improving electronic inpatient progress notes using voice: results from the VGEENS project. In *AMIA Annual Symposium Proceedings*, 2017.
77. G. Randall, D. Malcolm, **K. Lybarger**, and M. Malkin. Quantifying uncertainty in turbine suitability assessments. In *American Wind Energy Association WINDPOWER*, 2010.
78. D. Malcolm and **K. Lybarger**. Site suitability using generic wind turbine models. In *American Wind Energy Association WINDPOWER*, 2010.

Research Funding

Note: All funding described below is associated with my term at George Mason University.

Submitted Proposals

1. **Clinicians as Safety Mediators: Characterizing Trust Calibration in Conversational AI for Mental Health Intake**
   - *Investigators:* Natasha Tonge (PI), **Kevin Lybarger (PI)**, Debora Goetz Goldberg (Co-I), Eileen Roesler (Co-I)
   - *Sponsor:* National Institutes of Health
   - *Project Budget:* $406,388
   - *Personal Share:* $203,194
   - *Performance Period:* 12/2026-12/2028
   - *Status:* Under review

2. **Effectiveness of Artificial Intelligence in Management of Depression**

- *Investigators:* Farrokh Alemi (PI), **Kevin Lybarger (Co-I)**, *[need to determine rest of team]*
- *Sponsor:* National Institutes of Health
- *Project Budget:* $1,140,798
- *Personal Share: TBD*
- *Performance Period:* 2027-2031
- *Status:* Under review

3. **Clinician Evaluation of AI Trustworthiness for Mental Health Applications**
   - *Investigators:* Natasha Tonge (PI), **Kevin Lybarger** (Co-I)
   - *Sponsor:* OpenAI
   - *Project Budget:* $100,000
   - *Personal Share:* $0
   - *Performance Period:* 6/2026-11/2027
   - *Status:* Rejected

4. **Population-Scale Risk Intelligence: Data-Driven Supervisory Agents for Self-Harm Detection in Conversational AI**
   - *Investigators:* **Kevin Lybarger (PI)**, Farrokh Alemi (Co-I), K. Pierre Eklou (Co-I), Natasha Tonge (Co-I)
   - *Sponsor:* OpenAI
   - *Project Budget:* $100,000
   - *Personal Share:* $100,000
   - *Performance Period:* 5/2026-4/2027
   - *Status:* Rejected

5. **Elevating Patient Voices Through Digital Agents**
   - *Investigators:* **Kevin Lybarger (PI)**, Secili DeStefano (PI), Siddhartha Sikdar (Co-I), Holly Matto (Co-I), Jenny Phan (Co-I)
   - *Sponsor:* National Institutes of Health
   - *Project Budget:* $2,847,966
   - *Personal Share:* $1,423,983
   - *Performance Period:* 7/2026-6/2031
   - *Status:* Rejected

6. **FAIR-MH: Developing and Evaluating Trustworthy AI for Mental Health Intake and Service Delivery: A Community Stakeholder-Driven Approach**
   - *Investigators:* Natasha Tonge (PI), **Kevin Lybarger (PI)**, Robyn Mehlenbeck (Co-I), Amanda Sanchez (Co-I)
   - *Sponsor:* AIM-AHEAD, National Institutes of Health
   - *Project Budget:* $799,384
   - *Personal Share:* $399,692
   - *Performance Period:* 9/2025-9/2027
   - *Status:* Rejected

7. **CAREER: Advancing Trustworthy Conversational AI through Realistic User Simulation and Risk-Aligned Evaluation and Refinement**
   - *Investigators:* **Kevin Lybarger (PI)**
   - *Sponsor:* National Science Foundation
   - *Project Budget:* $690,081
   - *Personal Share:* $690,081

- *Performance Period:* 3/2026-2/2031
- *Status:* Rejected

8. **Collaborative Research: SaTC 2.0: RES: AI-Driven Human-Machine Co-Teaming for Adaptive and Agile Cyber Security Operations Centers**
   - *Investigators:* Massimiliano Albanese (PI), **Kevin Lybarger (Co-PI)**
   - *Sponsor:* National Science Foundation
   - *Project Budget:* $599,062
   - *Personal Share:* $239,625
   - *Performance Period:* 10/2025-9/2029
   - *Status:* Under review

9. **Impact of AI-Guided Care on Patients with Major Depression**
   - *Investigators:* Farrokh Alemi (PI), **Kevin Lybarger (Co-I)**, Kossi Eklou (Co-I), Niloofar Ramezani (Co-I), Susan Kornstein (Other), Priya Nambisan (Co-I)
   - *Sponsor:* US Department of Health and Human Services
   - *Project Budget:* $759,624
   - *Personal Share:* No indirect split. Salary support includes 0.9 total months.
   - *Performance Period:* 8/2025-7/2029
   - *Status:* Rejected

10. **Integrating Artificial Intelligence and Community Health Workers into an Innovative Multi-level Cancer Education Intervention: An Effectiveness-Implementation**
    - *Investigators:* **Kevin Lybarger (PI)**, Michele Williams (PI), Marcos Zampieri (Co-I), Bill Rosenberger (Co-I)
    - *Sponsor:* National Institutes of Health
    - *Project Budget:* $1,484,645
    - *Personal Share:* 40.0% ($593,858)
    - *Performance Period:* 7/2025-6/2029
    - *Status:* Rejected

11. **SaTC: CORE: Medium: A Multidisciplinary Evidence-Based Approach to Detecting and Mitigating Election Misinformation**
    - *Investigators:* Massimiliano Albanese (PI), **Kevin Lybarger (Co-PI)**, Marcos Zampieri (Co-PI), Mark Rozell (Co-PI)
    - *Sponsor:* National Science Foundation
    - *Project Budget:* $1,199,069
    - *Personal Share:* 28.5% ($341,735)
    - *Performance Period:* 6/2025-5/2029
    - *Status:* Rejected

Funded Proposals

12. **Network modeling as a unified framework to understand inter-individual differences in chronic musculoskeletal pain**
    - *Investigators:* Siddhartha Sikdar (PI), **Kevin Lybarger (Co-I)**, William Rosenberger (Co-I), Ben Seiyon Lee (Co-I)
    - *Sponsor:* National Institutes of Health
    - *Project Number:* 1R01AT013603-01
    - *Project Budget:* $4,649,740

- *Personal Share:* 17% ($778,831)
- *Performance Period:* 8/2025-7/2029

13. **SAFETI: Strategic Analysis for Fine-granular Injury and Fatality PrEvenTion Insight**
    - *Investigators:* Myeong Lee (PI), **Kevin Lybarger (PI)**
    - *Sponsor:* Virginia Department of Labor and Industry (DOLI)
    - *Project Budget:* $132,000
    - *Personal Share:* 50.0% ($66,000)
    - *Performance Period:* 6/2025-5/2026
14. **Evaluating Conversational Artificial Intelligence for Depression Management**
    - *Investigators:* Farrokh Alemi (PI), **Kevin Lybarger (PI)**, Gary Kreps (Co-I), Janusz Wojtusiak (Co-I), Kossi Pierre Eklou (Co-I), Niloofar Ramezani (Other), Aneel Ursani (Other)
    - *Sponsor:* Patient-Centered Outcomes Research Institute
    - *Project Number:* ME-2024C1-36732
    - *Project Budget:* $1,049,998
    - *Personal Share:* 50.0% ($524,999)
    - *Performance Period:* 2/2025-1/2028
15. **Leveraging AI/ML to Improve Cultural Preparedness of Mental Health Professionals**
    - *Investigators:* Natasha Tonge (PI & Mentee), **Kevin Lybarger (Mentor)**
    - *Sponsor:* University of North Texas Health Science Center (Sponsor), National Institutes of Health (Prime)
    - *Project Budget:* $65,475
    - *Personal Share:* No indirect split. Salary support includes 0.77 total months.
    - *Performance Period:* 9/2024-9/2025
16. **Research Scholarship for Autonomous AI in Management of Depression**
    - *Investigators:* Farrokh Alemi (PI), **Kevin Lybarger (Co-I)**, Janusz Wojtusiak (Co-I)
    - *Sponsor:* Johns Hopkins University (Sponsor), National Institutes of Health (Prime)
    - *Project Budget:* $70,906
    - *Personal Share:* No indirect split. Salary support includes 0.12 total months.
    - *Performance Period:* 9/2023-3/16/2025

Cumulative Funding Summary
- *Total Project Budget:* **$5,968,119** (5 projects)
- *Total Personal Share:* **$1,369,830** (3 projects)

Internal Funding

17. **AI-Enhanced Dialogue Solutions: Utilizing AI and Motivational Interviewing for Pain Management and Opioid Use Reduction**
    - *Investigators:* Hadeel Elyazori (Predoctoral Fellow), **Kevin Lybarger** (PhD Advisor), Siddhartha Sikdar (Mentor), Samuel Acuna (Mentor), Lynn Gerber (Mentor)
    - *Sponsor:* George Mason University's Institute for Digital InnovAtion
    - *Award:* Predoctoral Fellowship (2-year Academic Year GRA)
    - *Performance Period:* 9/2024-5/2026

Talks and Presentations

- Advancing patient-centered care through understanding & engagement. Plenary Session, Breaking Tradition: Disrupting Quality of Life Research with AI, *International Society for Quality of Life Research Annual Conference, Artificial Intelligence & the Future of Quality of Life Research*, October 2025. **[Invited plenary talk]**.
- Extracting social determinants of health: Annotation, extraction, information gain, and ethical considerations. *Biomedical Informatics & Data Science Grand Rounds, Johns Hopkins University Medicine*, October 2024. **[Invited talk]**.
- Extracting social determinants of health: Annotation, extraction, information gain, and ethical considerations. *Yale College of Public Health, Biostatistics Seminar*, November 2023. **[Invited talk]**.
- Extracting social determinants of health: Annotation, extraction, information gain, and ethical considerations. *Boston Children's Hospital Computational Health Informatics Program (CHIP) & Harvard Medical School*, November 2023. **[Invited talk]**.
- Leveraging natural language processing to augment structured social determinants of health data in the electronic health record. *JAMIA Journal Club*, June 2023. **[Invited talk]**.
- A corpus of radiology reports from multiple imaging modalities with fine-grained event-based annotations. AMIA Annual Symposium (podium presentation), Nov. 2022.
- Extracting radiological findings from medical imaging reports. *National Library of Medicine (NLM) T15 Training Conference*, June 2022.
- Annotating social determinants of health using active learning, and characterizing determinants using neural event extraction. *University of Washington Center for Studies in Demography & Ecology Seminar Series*, November 2021. **[Invited talk]**.
- Identifying ARDS in chest radiograph reports. *National Library of Medicine (NLM) T15 Training Conference*, June 2021.

Teaching

Courses Taught

Graduate Level

AIT 526: Introduction to Natural Language Processing (NLP)

- Covers rule-based and statistical methods for analyzing textual data.
- Explores language modeling, vector semantics, information extraction, and deep learning.
- Emphasizes practical Python implementation using industry tools like NLTK and SpaCy.

IT 700: Doctoral Seminar I: Introduction to Research

- Orients PhD students to IT research methodologies and computational thinking.
- Focuses on literature critique, rigorous problem formulation, and methodological design.
- Culminates in the development and presentation of a comprehensive research proposal.

Undergraduate Level

IT 209: Introduction to Object Oriented Programming

- Teaches the Object-Oriented Programming (OOP) paradigm using Python.
- Prioritizes robust, modular code design via inheritance and encapsulation.
- Requires hands-on implementation of solutions for complex computing problems.

Teaching Reviews

Table 1: Overall rating of teaching and courses. "Instr." is average of Q18-Q20. "Course" is average of Q13-Q17. Abbreviations: Enrollment (Enr.), Response Rate (Resp. %), Instructor (Instr.)

#	Term	Course	Enr.	Resp. %	My Rating		Avg. Dept. Ratings	
					Instr.	Course	Instr.	Course
1	Fa '25	IT 700.1	23	95.7%	4.74	4.80	4.22	4.20
2	Sp '25	IT 209.5	33	84.8%	4.68	4.67	4.19	4.18
3	Fa '24	IT 700.1	31	96.8%	4.56	4.58	4.19	4.16
4	Fa '24	IT 209.5	32	84.4%	4.52	4.60	4.19	4.16
5	Sp '24	IT 209.4	19	94.7%	4.58	4.67	4.17	4.16
6	Fa '23	IT 700.1	30	86.7%	4.91	4.95	4.10	4.09
7	Sp '23	AIT 526.1	16	87.5%	4.91	4.83	4.15	4.16
8	Fa '22	AIT 526.1	28	100.0%	4.88	4.80	4.08	4.08

New Courses Developed

- *IT 700: Doctoral Seminar I: Introduction to Research* (Taught Fall 2023, Fall 2024)
  - Graduate course introducing early-stage PhD students to research methods, IT topics, and academic life. Teams develop research proposals by conducting literature reviews, identifying knowledge gaps, formulating questions, proposing solutions, and creating execution plans.

Students Advised

Current PhD Students

- *Hadeel R. A. Elyazori* — IST (Post-comprehensive, Expected Spring 2027)
- *Mohammad Sabik Irbaz* — IST (Pre-comprehensive, Expected Fall 2027)
- *Md. Mushfiqur Rahman* — Computer Science (Post-proposal, Expected Fall 2026)
  Co-Advised with Dr. Ziwei Zhu
- *Saadat Hasan Khan* — Computer Science (Post-comprehensive, Expected Spring 2027)
  Co-Advised with Dr. Amarda Shehu
- *Md Tanvir Rouf Shawon* — Computer Science (Pre-comprehensive, Expected Spring 2028)
  Co-Advised with Dr. Antonis Anastasopoulos

Masters Students Mentored

- *Benchmarking Clinical Accuracy in AI-Generated Patient Dialogues Using Large Language Models* (Fall 2025)
  - Capstone Project, Health Administration and Policy, College of Public Health
  - Student: Gauri Mahajan
- *AI for Treatment of Major Depression — Safety Planning and Risk of Suicide* (Spring 2024)
  - DAEN 690 Capstone Project
  - Faculty mentors include Isaac Gang, Farrokh Alemi, Kevin Lybarger
  - Capstone team includes Akshay Govindareddy, Arpita Lnu, Bajo Tetteh, Narsimha Reddy Yeduru, Nikhil Bapanpalli, Sarang Sanjay Tirmanwar
- *AI for Treatment of Major Depression — Treatment of Bipolar Depression* (Spring 2024)
  - DAEN 690 Capstone Project
  - Faculty mentors include Brett Berlin, Farrokh Alemi, Kevin Lybarger

  - Capstone team includes Karthik Manusanipalli, Maneesha Inavolu, Navya Vaishnavi Bellamkonda, Parth Atul Doshi, Prem Pinakin Gandhi, Sravani Pulusu

Undergraduate Students Mentored

- *Using Natural Language Processing to identify the biopsychosocial factors underlying chronic pain* (May 2025 - present)
  - OSCAR Undergraduate Research Scholars Program
  - Advisors: Samuel Acuna, **Kevin Lybarger**
  - Undergraduate students: Rusul Abdulrazzaq, Stephanie Krafsig, Ande Mitchell, Blessing Nguyen, Thomas Rossi, Sasanka Sreedevi-naresh
  - Related work: Paper [54]; Posters [58, 59]
- *Recording the lived experiences of patients with chronic pain from minoritized and underserved communities* (May 2024 - April 2025)
  - OSCAR Undergraduate Research Scholars Program
  - Advisors: Samuel Acuna, **Kevin Lybarger**, Ben Lee
  - Undergraduate students: Rusul Abdulrazzaq, Hana Al Shawi, Isaac Paki Elom Amouzou, Patrick King, Mahdia Popal, Syleah Manns (Graduated Dec. 2024)
  - Related work: Paper [37]; Posters [61, 63]
  - Internal OSCAR Symposium posters: (August 2025)
    * Extracting Biopsychosocial Insights from Motivational Interview Transcripts on Chronic Pain.
    * Capturing the Lived Experiences of Individuals with Chronic Pain through Motivational Interviewing.
  - Letter writer for Ms. Abdulrazzaq's medical school application (April 2025)

Service

Internal Service

PhD Committee Membership

- *Sadiya S. C. Puspo* — IST (Pre-comprehensive Exam)
- *Md Nahid Hasan Shuvo* — IST (Pre-comprehensive Exam)
- *Arka Ghosh* — IST (Post-comprehensive Exam)
- *Yili Lin* — Health Administration and Policy, College of Public Health (Pre-comprehensive Exam)
- *Rehab Abdullah A Alsudais* — IST (Post-comprehensive Exam)
- *Alphaeus Eric Dmonte* — IST (Post-comprehensive Exam)
- *Elijah Bass* — IST (Post Dissertation Proposal)
  "An Autonomous Reasoning System for Proactive Sensitive Information Detection and Classification"
- *Namu Park* — University of Washington (external member) (Graduated 2024)
  "Leveraging Large Language Models for Clinical Information Extraction in Radiology Reports"
- *Kai North* — IST (Graduated May 2024)
  "Computational Approaches to Lexical Complexity Prediction and Simplification"
- *Giridhar Kaushik Ramachandran* — IST (Graduated May 2024)
  "Extracting Clinically Relevant Information From Text Using Pre-Trained Language Models"

Institutional Review, Leadership, and Governance

- *Strategic Analysis for Fine-granular Injury and Fatality PrEvenTion Insight* — Presentation to CEC Research Council (Spring 2026)
- *AI Stack for Research and Proposal Writing* — Research and Scholarship at Mason: Responsible Use of AI, Orientation and Refresher (Spring 2026)
- *An AI-Based Framework for Understanding Occupational Injuries across Virginia* — Poster, GMU AI-in-Gov Council Industry Day (2025)
- *Judge/Reviewer* — Capstone judge for IT492 (Fall 2025)
- *Member* — IST "Teaching in the AI Era" Working Group (Fall 2025)
- *Enhancing Programming Pedagogy Through Interactive Jupyter Notebooks* — Stearns Center for Teaching and Learning, Innovations in Teaching and Learning Conference (Teaching Talk) (2025)
- *Community of Interest Lead* — Desktop/VDI, Research Computing Strategic Planning, Office of Research, Innovation, and Economic Impact (ORIEI) (Summer & Fall 2025)
- *Faculty Search Participation* — Met with all invited faculty candidates through individual interviews and/or seminar attendance (Spring 2025)
- *Judge/Reviewer* — Capstone judge for IT493 (Spring 2025)
- *Committee Member* — Research Committee - Planning the PhD IST Symposium (Spring 2025)
- *Committee Member* — IST DFW Task Force (Spring 2025)
- *Judge/Reviewer* — Capstone judge for IT492 (Fall 2024)
- *Scholarship Selection Chair* — Schorling Scholarship in IST (2023-present)
- *Committee Member* — IST chair renewal (2023)
- *Reviewer* — Institute of Digital InnovAtion, Public-Private-Partnership Faculty Fellows (2023)
- *Reviewer* — Institute of Digital InnovAtion, Predoctoral Fellows (2023)

Internal Talks & Knowledge Sharing

- *Understanding Patients Using AI: Language-Aware Methods for Chronic Pain Narratives and Equitable Depression Care* — CMI Seminar Series, Center for MedTech Innovation, College of Engineering and Computing (2026)
- *Advancing Patient-Centered Care Through Understanding & Engagement* — Guest Lecture, AIT 790: Large Language Models and Applications (2025)
- *Podcast Guest — AI in Healthcare: Trust, Risk, and the Future of Patient Conversations* — GMU AI-in-Gov Council, *Inside the Black Box* Podcast (2025)
- *Quadrant Talk - Research Focus, Impact, and Synergies* — School of Computing Research Forum (2025)
- *Text Data in the Age of AI: Large Language Models for Knowledge and Insight* — GMU Schar School of Policy and Government's Organization Development and Knowledge Management Learning Community Event (2025)
- *AI and Language: Transforming Health and Critical Infrastructures* — GMU's AI-in-Gov Council Launch Event (2025)
- *Introduction to LLMs and Their Capabilities* — GMU, College of Engineering and Computing Seminar: Hands-on Generative AI Workshop (2024)
- *NLP for Improved Data Utilization, Information Accessibility, and Information Integrity* — Research talk for the GMU's Center for Advancing Human-Machine Partnership (CAHMP) (2023)
- *Research Overview Presentation* — GMU IST Advisory Board (2023)

Professional and Continuing Education

- *LLM & MPC & RAG, Oh My!* — Guest Lecture, George Mason University Chief AI Officer Certificate Program, School of Business (2026)

External Service

Grant Reviewing

- *Panelist* — National Institutes of Health (NIH), Center for Scientific Review (2025)
  - Special Emphasis Panel ZRG1 HSS-D(90): Health Services and Systems

Editorial Roles

- *Editorial Board* – Journal of Biomedical Informatics (2024-present)
- *Advisory Board* — Journal of Biomedical Informatics, Special Issue on "Learning from Multiple Data Sources for Decision Making in Health Care," (2024-2025)
- *Focus Issue Co-Editor* — Journal of the American Medical Informatics Association focused on "Social Determinants of Health (SDOH) Extraction through Natural Language Processing" (2023)

Conference and Journal Reviewing

- *Reviewer* — Journal of Biomedical Informatics (2020-present)
- *Reviewer* — ACL Rolling Review (ARR) (2025-present)
- *Reviewer* — Nature Communications Medicine (2025)
- *Reviewer* — IEEE Internet Computing (2024)
- *Reviewer* — Journal of Clinical and Translational Science (2023)
- *Reviewer* — Psychiatric Services (2023)
- *Reviewer* — IEEE Big Data Workshop, 3rd Workshop on Multimodal AI (2023)
- *Reviewer* — American Medical Informatics Association Annual Symposium (2021)
- *Reviewer* — International Journal of Medical Informatics (2021)

Events Organization

- *Co-Chair* — American Medical Informatics Association NLP Working Group, Graduate Student Consortium (2023)
- *Panelist* — American Medical Informatics Association NLP Working Group, Session on Social Determinants of Health (2023)
- *Co-Organizer* — National NLP Clinical Challenges (n2c2), Track 2 on Extracting Social Determinants of Health (2022)

Professional Evaluations

- *Expert Reference* — Provided two (2) evaluations for United States EB-2 National Interest Waiver. Mason student names redacted for confidentiality. (2025)
- *Expert Reference* — Provided an evaluation for United States EB-2 National Interest Waiver. Name redacted for confidentiality. (2024)

Global Development and Community Contributions

- *Engineers Without Borders* — Led the design and installation of a photovoltaic water pumping system, providing potable water to over 100 people in rural Peru (2005-2007)