Kevin W. Jin

Ph.D. Student, Yale University

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New Haven, CT 06511

Education

2023–28[*] **Ph.D.**, Computational Biology and Biomedical Informatics, Yale University
Committee: Hua Xu (Advisor), Qingyu Chen (Chair), Sarah W. Yip, Carolyn I. Rodriguez

2016–20 **B.S.**, Molecular and Cellular Biology, Johns Hopkins University

Interests

Clinical natural language processing, large language models (LLMs) for psychiatry, digital phenotyping, wearable biosensors

Research Experience

2023– **Graduate Researcher**, Yale School of Medicine
Advisor: Hua Xu
LLM clinical reasoning evaluation and psychiatric decision support using electronic health records.

2022–2023 **Research Intern**, UT Southwestern Medical Center
Advisor: Guanghua Xiao
NLP-based prediction of cutaneous lupus erythematosus severity using electronic health records, and digital pathology.

2022–2023 **Research Assistant**, The University of Texas at Dallas
Advisor: Qiwei Li
Bayesian shape clustering in R. Co-supervised three high school summer interns.

2019–2020 **Undergraduate Research Assistant**, Johns Hopkins University
Advisor: Soojung Claire Hur
Microfluidics-based culture and single-cell analysis of prostate cancer cell migration in response to odorants; exosome-based drug delivery.

2018 **Summer Research Intern**, UT Southwestern Medical Center
Advisor: Debabrata Saha
Treated cancer cells with radiosensitizing drugs in hypoxic environments.

2018–2019 **Undergraduate Research Assistant**, Johns Hopkins University
Advisor: Steven S. An
Role of an olfactory receptor in prostate cancer metastasis; work continued in the Hur Lab.

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[*]Expected.

Professional Experience

2025–	**Graduate Writing Lab Fellow**, Yale University Poorvu Center for Teaching and Learning, New Haven, CT
	Consult 1-1 with graduate researchers across scientific disciplines on structuring arguments and communicating complex findings to diverse audiences (e.g., dissertations, publications, grants), serving the 7500+ graduate students at Yale.
2025	**Medical Writing Operations Intern**, Alexion, AstraZeneca Rare Disease, New Haven, CT
	Built a GraphRAG knowledge base to steer the writing style of LLM-authored clinical study reports of an investigational drug for submission to regulatory agencies, in partnership with Graphlit and InteliNotion; work adopted and continued by the team.
	Advised model selection and iteratively designed 10+ production-grade LLM prompts generating corresponding sections of a clinical study report, in partnership with InteliNotion.
2025	**GSAS Professional Experience Fellowship**, Yale School of Engineering and Applied Science, New Haven, CT
	Conducted data analytics for school administration, including assembling a facts and figures reference page and building a conditional rendering pipeline for departmental reporting using Quarto.

Awards & Honors

2025–30	NSF Graduate Research Fellowship ($159,000)
2025	Google Gemini Academic Program ($10,000)
2025	OpenAI Researcher Access Program ($7,000)
2023	DoD National Defense Science and Engineering Fellowship (Honorable Mention)

Publications

G Google Scholar

† denotes equal contribution.

Journal Articles

J6 Yang, J., Jiang, X., **Jin, K. W.**, Shin, S. & Li, Q. Bayesian hidden mark interaction model for detecting spatially variable genes in imaging-based spatially resolved transcriptomics data. *Frontiers in Genetics* **15.** Link. (2024).

J5 **Jin, K. W.**, Li, Q., Xie, Y. & Xiao, G. Artificial intelligence in mental healthcare: an overview and future perspectives. *British Journal of Radiology* **96.** Link. (2023).

J4 Rong, R., Sheng, H., **Jin, K. W.**, Wu, F., Luo, D., Wen, Z., Tang, C., Yang, D. M., Jia, L., Amgad, M., Cooper, L. A., Xie, Y., Zhan, X., Wang, S. & Xiao, G. A Deep Learning Approach for Histology-Based Nuclei Segmentation and Tumor Microenvironment Characterization. *Modern Pathology* **36.** Link. (2023).

J3 Wen[†], Z., Lin[†], Y.-H., Wang, S., Fujiwara, N., Rong, R., **Jin, K. W.**, Yang, D. M., Yao, B., Yang, S., Wang, T., Xie, Y., Hoshida, Y., Zhu, H. & Xiao, G. Deep-Learning-Based Hepatic Ploidy Quantification Using H&E Histopathology Images. *Genes* **14.** Link. (2023).

J2 Zhang[†], X., Gleber-Netto[†], F. O., Wang, S., Martins-Chaves, R. R., Gomez, R. S., Vigneswaran, N., Sarkar, A., William Jr., W. N., Papadimitrakopoulou, V., Lippman, S. M., Williams, M., Bell, D., Heymach, J. V., Gillenwater, A. M., Myers, J. N., Ferrarotto, R., **Jin, K. W.**, Pickering, C. R. & Xiao, G. A Deep Learning Onion Peeling Approach to Measure Oral Epithelium Layer Number. *Cancers* **15.** Link. (2023).

J1 Zhou, Q. *et al.* Osteosarcoma Explorer: A Data Commons with Clinical, Genomic, Protein and Tissue Imaging Data for Osteosarcoma Research. *JCO Clinical Cancer Informatics* **7.** Link. (2023).

Working Papers

W2 **Jin, K. W.** *et al. Diagnostic Accuracy and Clinical Reasoning of Multiple Large Language Models in Psychiatry.* medRxiv [Preprint] [Under Review]. Link. 2026.

W1 Jiang, X., Luo, D., Fernández, E., Yang, J., **Jin, K. W.**, Zhan, Y., Yao, B., Bedi, S., Xiao, G., Zhan, X., Li, Q. & Xie, Y. *Spatial Transcriptomics Arena (STAr): an Integrated Platform for Spatial Transcriptomics Methodology Research.* bioRxiv [Preprint]. Link. 2023.

Presentations

Talks

T8 **Jin, K. W.** *A multimodal foundation model for psychiatry.* McLean Hospital Functional Neuroimaging and Bioinformatics (FNIBI) Lab Seminar (Boston, MA, USA). Oct. 2025.

T7 **Jin, K. W.** *Accelerating regulatory medical writing with large language models.* Monthly Science Club at Alexion, AstraZeneca Rare Disease (New Haven, CT, USA). Aug. 2025.

T6 **Jin, K. W.** *Accelerating regulatory medical writing with large language models.* Quantitative Sciences Division at Alexion, AstraZeneca Rare Disease (New Haven, CT, USA). Aug. 2025.

T5 **Jin, K. W.** *Evaluating frontier large language models for psychiatric diagnosis: a novel assessment of diagnostic reasoning.* AI at Yale Symposium (New Haven, CT, USA). May 2025.

T4 **Jin, K. W.** *Modeling psychiatric phenotypes from wearable accelerometer data derived from the UK BioBank.* Yale University Bridging GAPS Diversity in STEM Symposium (New Haven, CT, USA). Slides. Apr. 2024.

T3 **Jin, K. W.** *Bayesian Clustering of n-gons via a Double Dirichlet Mixture Model.* Texas Oklahoma Regional Undergraduate Symposium (Dallas, TX, USA). Slides. Feb. 2023.

T2 **Jin, K. W.** *Adventures in Cluster Analysis: Approaching Shape Clustering.* The University of Texas at Dallas Joint Bioinformatics Seminar (Virtual). Slides. Oct. 2022.

T1 **Jin, K. W.** *Generating Microfluidic Gradients for the Study of an Olfactory Receptor involved in Prostate Cancer Metastasis.* Johns Hopkins Undergraduate Research Symposium (Baltimore, MD, USA). Slides. Oct. 2019.

Posters

P3 **Jin, K. W.**, Garrett, M., Huang, A., Mathis, W. S., Montelongo, M., Nagpal, C., Shei, J., Weathers, J., Zaboski, B. A., Zhang, J., Selek, S., Sharma, M. S., Pittenger, C., Yip, S. W., Malgaroli, M. & Xu, H. *Evaluating the diagnostic ability of frontier large language models on psychiatry case vignettes.* American Medical Informatics Association <u>Annual Symposium</u> (Atlanta, GA, USA). Nov. 2025.

P2 **Jin, K. W.**, Xie, Q., Qian, L., Zhang, J., Huang, J., Zhou, Y. & Xu, H. *Evaluating large language models for complex diagnostic reasoning in psychiatry.* <u>Computational Psychiatry</u> (Minneapolis, MN, USA). PDF. July 2024.

P1 **Jin, K. W.**, Lam, H., Wang, H., Luo, J., Zheng, Q., Valkenburg, K., Hurley, P., Pluznick, J. L., Tran, P. T., De Marzo, A. M., Isaacs, W. B., Pienta, K. J. & S., A. S. *Could olfactory receptors modulate prostate cancer metastasis?* Johns Hopkins <u>Day of Undergraduate Research in Engineering, the Arts & Humanities, Medicine and the Sciences</u> (Baltimore, MD, USA). PDF. Apr. 2018.

Panels

L2 King, K., Rodriguez, C. I., Kim, J., Zaboski, B. A., Nurmi, E., Muller, G. & **Jin, K. W.** *Research Roundtable: OCD and AI.* Invited speaker on podcast hosted by the International OCD Foundation (Virtual). Aug. 2025.

L1 Rodriguez, C. I., **Jin, K. W.**, Muller, G., Kim, J. & Zaboski, B. A. *Beyond the Algorithm: A Human-Centered Approach to AI in OCD Treatment.* Invited speaker at "Strengthen Your OCD Practice: Ethics, AI, and Options for Care" Continuing Medical Education conference hosted by the International OCD Foundation (Virtual). Dec. 2025.

Teaching & Mentorship

Yale University

2024–	**Diversity, Equity, and Inclusion Student Chair**, Computational Biology and Biomedical Informatics Program
2024–	**Workshop Leader**, From Milliliters to Megabytes: Scientific Computing and Data Management Series (workshops for non-computationally-oriented researchers), jointly hosted by the Yale Biological and Biomedical Sciences Diversity and Inclusion Collective, the Yale Center for Research Computing, and the Wu Tsai Institute
2023–2024	**Peer Mentor**, Computational Biology and Biomedical Informatics Program

Johns Hopkins University

2019–2020	**Undergraduate Learning Assistant**, General Physics for Physical Science Majors (AS.171.107-8)
2018–2020	**Student Mentor**, General Biology (AS.020.151-2)

Academic Service

Conference Organizer

2024   The 15th Workshop on Visual Analytics in Healthcare, in conjunction with the
        American Medical Informatics Association Annual Symposium, 2024

Conference Reviewer

2024   The 31st International Conference on Computational Linguistics, 2025

Journal Reviewer

2025   *Journal of the American Statistical Association*

Memberships

2023–   Sigma Xi
2023–   American Medical Informatics Association
2022–   American Statistical Association

Last updated: February 12, 2026