

**Kevin W. Jin**  
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## 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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## Professional Experience

2025–	<b>Graduate Writing Lab Fellow</b> , 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	<b>Medical Writing Operations Intern</b> , 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	<b>GSAS Professional Experience Fellowship</b> , 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

- J7 Rong, R., Gu, Z., Lai, H., Nelson, T. L., Keller, T., Walker, C., **Jin, K. W.**, Chen, C., Navar, A. M., Velasco, F., Peterson, E. D., Xiao, G., Yang, D. M. & Xie, Y. A deep learning model for clinical outcome prediction using longitudinal inpatient electronic health records. *JAMIA Open* **8**. [Link](#). (2025).
- 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<sup>†</sup>, Z., Lin<sup>†</sup>, 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<sup>†</sup>, X., Gleber-Netto<sup>†</sup>, 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.** Accelerating regulatory medical writing with large language models. Monthly Science Club at Alexion, AstraZeneca Rare Disease (New Haven, CT, USA). Aug. 2025.
- T7 **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.
- T6 **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.
- T5 **Jin, K. W.** Towards a multimodal foundation model for psychiatry. McLean Hospital Functional Neuroimaging and Bioinformatics (FNIBI) Lab Seminar (Boston, MA, USA). Oct. 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 Annual Symposium (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*. Computational Psychiatry (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 Day of Undergraduate Research in Engineering, the Arts & Humanities, Medicine and the Sciences (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–	<b>Diversity, Equity, and Inclusion Student Chair</b> , Computational Biology and Biomedical Informatics Program
2024–	<b>Workshop Leader</b> , 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	<b>Peer Mentor</b> , 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

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