

**Weidong Wu**

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**CONTACT**

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GitHub: [Github.com/wvdon](https://github.com/wvdon)

**EDUCATION**

PhD., Biomedical Informatics, 2024 - Present  
The Ohio State University, Columbus, OH, USA. ([Qin Ma](#) and [Anjun Ma](#))  
M.S., Biomedical, 2024  
Zhengzhou University, Henan, Zhengzhou, China. ([Ying Peng](#) and [Xia Xue](#))  
B.S., Software Engineering, 2021  
Zhengzhou University, Henan, Zhengzhou, China.

**PROFESSIONAL EXPERIENCE**

08/2024-present, **Graduate Research Assistant**  
Department of Biomedical Informatics at The Ohio State University, OH

- Analyze bulk-level, single-cell, and spatial multi-omics datasets to derive meaningful insights for immuno-oncology research.
- Developed deep learning frameworks to enable cross-species analysis of single-cell and spatial omics data, providing new opportunities to investigate conserved and divergent molecular mechanisms across organisms.
- To establish a centralized AI-driven knowledgebase for integrating single-cell and spatial omics data across neurodegenerative diseases (ssKIND).

**JOURNAL PUBLICATIONS**

Full list: <https://scholar.google.com/citations?user=kKMLVpUAAAAJ&hl=en>

First and co-first author (#)

1. **Wu, W.**<sup>#</sup>, Liu, B. <sup>#</sup>, Zhang, Q. <sup>#</sup>, Zhang, X., Feng, P., Jia, Y., & Xue, X. (2025). Heterogeneity and efficacy of immunotherapy in multiple cancer: insights from a meta-analysis. Biological Procedures Online, 27(1), 17.

2. Si, Y<sup>#</sup>, **Wu, W.**<sup>#</sup>, Xue, X., Sun, X., Qin, Y., Li, Y., ... & Zheng, P. (2023). The evolution of SARS-CoV-2 and the COVID-19 pandemic. *PeerJ*, 11, e15990.
3. **Wu, W.**<sup>#</sup>, Wang, Y., Xu, S., & Yan, K. (2020, September). Sfnn: Semantic features fusion neural network for multimodal sentiment analysis. In 2020 5th International Conference on Automation, Control and Robotics Engineering (*CACRE*) (pp. 661-665). IEEE.

### Contributing author

1. Wang, Y., Ma, A., Song, N.J., Shannon, A.E., Amankwah, Y.S., Chen, X., **Wu, W.**, Wang, Z., Saadey, A.A., Yousif, A. and Ghosh, G., 2025. Proteotoxic stress response drives T cell exhaustion and immune evasion. *Nature*, pp.1-11.
2. Dong, H., Liang, C., Zhang, J., **Wu, W.**, Kumar, N., Liu, Z., Sun, Y., Liao, Z., Cheng, X., Yu, Y. et al., 2025. O-GlcNAc transferase plays dual antiviral roles by integrating innate immunity and lipid metabolism. *Nature Communications*, 16, pp.1-14.
3. Miller, S.J., Zhong, H., **Wu, W.**, Cordova, A.M., Smith, M.E., Yashchenko, A., Li, Z., Jafree, D.J., Zimmerman, C.N., DeVette, C.I. and Do, V., 2025. A cross model spatial and single-cell atlas reveals the conserved involvement of osteopontin in polycystic kidney disease. *bioRxiv*, pp.2025-09.
4. Wang, X., Duan, M., Su, P.L., Li, J., Krull, J., Jin, J., Chen, H., Sun, Y., **Wu, W.**, He, K. and Carpenter, R., 2025. Deep-learning-enabled multi-omics analyses for prediction of future metastasis in cancer. *bioRxiv*, pp.2025-05.
5. Jiang, Y., Wang, S., Feng, S., Wang, C., **Wu, W.**, Huang, X., Ma, Q., Wang, J. and Ma, A., 2024. scGNN+: Adapting ChatGPT for Seamless Tutorial and Code Optimization. *bioRxiv*, pp.2024-09.
6. Ye, S., Li, C., Zhao, R. and **Wu, W.**, 2019. NOAA-LSTM: A new method of dialect identification. In Artificial Intelligence and Security: 5th International Conference, *ICAIS 2019*, New York, NY, USA, July 26-28, 2019, Proceedings, Part I 5 (pp. 16-26). Springer International Publishing.

### Journal reviewer:

2025, **Heliyon, Guest Reviewer**

### PRESENTATIONS

2025,

### MENTORING

2025/08, **Juile Zhu** (Undergraduate, OSU)  
B.S. in Mathematics and Neuroscience

## AWARDS

- Second place in the multimodal emotion recognition track of the 'KDDI' AI algorithm competition (Rank:2/456).
- China University Computer Challenge "Network Technology Challenge", Second Prize in Central China Region.
- ACM Programming Competition, Zhengzhou University, First Prize.
- "Coretronic Cup" Future Car Human-Machine Interaction Design Competition, 7 th (Top 0.1%)
- "Challenge Cup" National Competition of Extracurricular Academic Science and Technology Works for University Students, First Prize in Henan Province.

## SKILLS

- **Bioinformatics & Data Analysis:** Next-generation sequencing, proteomics, single-cell multi-omics data analysis, high-performance computing (R, Python, HPC systems)
- **Software Development:** Java Boot Spring, Vue, Flask, Sql.
- **Machine Learning & AI:** Pytorch.
- **Data Visualization:** Creation of impactful visualizations (Adobe Illustrator, ggplot2, BioRender)