RUINING DENG

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EDUCATION

Vanderbilt University Nashville, TN
Doctor of Philosophy, Computer Science, GPA: 3.89/4.0 November 2024
Thesis topic: *Knowledge-infused Efficient Learning for Computational Pathology*
Advisor: Dr. Yuankai Huo

Vanderbilt University Nashville, TN
Master of Science, Computer Science, GPA: 3.96/4.0 December 2022

China University of Mining and Technology Beijing, China
Bachelor of Science, Information Engineering June 2019
GPA: 3.99/4.0 (Core GPA: 4.0/4.0), Rank: 1/31

AWARDS AND HONORS

- Early Stage Investigator (ESI) Travel Award, KPMP Jan 2025, Aug 2026
- CTP Project Award, Weill Cornell Medicine June 2026
- Doctoral Dissertation Award, Association for Pathology Informatics May 2026
- Early Stage Investigator (ESI) Travel Award, OKRA, UAB Mar 2026
- Distinguished Reviewer Award (Platinum Level, top 8), IEEE TMI Dec 2025
- Conference Travel Grant, Medical Image with Deep Learning July 2025
- CTSC Pilot Award, Weill Cornell Medicine June 2025
- Outstanding Graduate Award (top 2%), Vanderbilt Graduate School May 2025
- Gold-level Distinguished Reviewer Certificate (top 20), IEEE TMI Oct 2024
- C.F. Chen Best Paper Runner-up, Vanderbilt May 2024
- Cornell NYC AIMI Fellowship, Weill Cornell Medicine Apr 2024
- All-Conference Best Student Paper Award Finalist, SPIE Medical Imaging Feb 2024
- Student Conference Travel Grant, SPIE Medical Imaging Feb 2023
- Graduate School Travel Award, Vanderbilt Feb 2022, Feb 2023, Feb 2024
- First-class Scholarship of the University (top 2%), CUMTB Nov 2016, Nov 2017
- Outstanding Graduate Award (top 4%), CUMTB June 2019
- Outstanding Graduation Thesis Award (top 8%), CUMTB June 2019

ACADEMIC POSITIONS

Weill Cornell Medicine New York, NY
- Instructor of Artificial Intelligence (Advisor: Mert R. Sabuncu) Nov 2024 – Present

Vanderbilt University Nashville, TN
- AI scholar, Vanderbilt Lab for Immersive AI Translation May 2024 – Nov 2024

- Student, Vanderbilt Institute for Surgery and Engineering Mar 2020 – Nov 2024
- Ph.D. Student, Biomedical Data Representation and Learning Lab Mar 2020 – Nov 2024

RESEARCH EXPERIENCE

Vanderbilt University Nashville, TN
- Research Assistant Mar 2020 – Nov 2024

Guangdong Provincial Cardiovascular Institute Guangzhou, China
- Research Staff June 2019 – Aug 2019

University of Notre Dame South Bend, IN
- Visiting Student (Advisor: Dr. Yiyu Shi) Jul 2018 – Sep 2018

TEACHING EXPERIENCE

Aalto University
- Guest Lecturer, AI in Health Technologies Fall 2025

Weill Cornell Medicine
- Guest Lecturer, BME MS AI in Medical Imaging Summer 2025

Cornell Tech
- Guest Lecturer, CS 5304 Data Science in the Wild Spring 2025

Vanderbilt University Nashville, TN
- Guest Lecturer, DS-5660 Deep Learning Fall 2024
- Guest Lecturer, CS-4267 Deep Learning Spring 2024
- Language Program Staff Member, Vanderbilt Center of Language Fall 2021 – Fall 2023
- Teaching Assistant, CS-3891 Deep Learning Spring 2021
- Teaching Assistant, DS-5660 Modeling and Machine Learning II Fall 2020
- Grader, EECE-5353-01 Image Processing Fall 2020

PROFESSIONAL EXPERIENCE

Roche Santa Clara, CA
- Imaging Scientist Intern (Supervisor: Dr. Yao Nie) May 2023 – Aug 2023

Bridge Investment Group Charlotte, NC
- Software Engineer Intern May 2020 – Aug 2020

PUBLICATION

Journal (First & corresponding author)

[J26] Cheng, F., Gong, K., Liu, S., Zhao, B., Zhu, J., Zhu, Z., ... & **Deng, R.** (2026). *PathLang:*

A Language-Centered Benchmark for Vision-Language Models in Computational Pathology. Under review.

[J25] Guo, Z., Saluja, R., Shi, T., Yao, T., Liu, Q., Zhu, J., ... & **Deng, R.** (2026). *From Classification to Cross-Modal Understanding: Leveraging Vision-Language Models for Fine-Grained Renal Pathology*. Machine Learning for Biomedical Imaging, 2026, 903-932.

[J24] **Deng, R.,** Zhu, J., Xiong, J., Cui, C., Yao, T., Guo, J., ... & Huo, Y. (2025). *IRS: Incremental Relationship-guided Segmentation for Digital Pathology.* Under review.

[J23] **Deng, R.,** Yao, T., Tang, Y., Guo, J., Lu, S., Xiong, J., ... & Huo, Y. (2026). *KPIs 2024 Challenge: Advancing Glomerular Segmentation from Patch-to Slide-Level.* Medical Image Analysis, 104234.

[J22] **Deng, R.,** Cui, C., Remedios, L. W., Bao, S., Womick, R. M., Chiron, S., ... & Huo, Y. (2024). *Cross-scale Multi-instance Learning for Pathological Image Diagnosis.* Medical Image Analysis, 2024 103124.

[J21] **Deng, R.,** Liu, Q., Cui, C., Yao, T., Long, J., Asad, Z., ... & Huo, Y. (2023). *Omni-seg: A scale-aware dynamic network for renal pathological image segmentatio*n. IEEE Transactions on Biomedical Engineering, 2023. 70(9): p. 2623-2644.

[J20] **Deng, R.,** Yang, H., Jha, A., Lu, Y., Chu, P., Fogo, A. B., & Huo, Y. (2021). *Map3D: Registration-Based Multi-Object Tracking on 3D Serial Whole Slide Images.* IEEE transactions on medical imaging, 40(7), 1924-1933.

Journal (Co-author)

[J19] Xu, G., Duan, Y., Xia, J., **Deng, R.,** Jin, W., & Shi, Y. (2026). *Patient-Conditioned Adaptive Offsets for Reliable Diagnosis across Subgroups*. IEEE Transactions on Medical Imaging.

[J18] Zhu, J., **Deng, R.,** Guo, J., Yao, T., Lu, S., Qu, C., ... & Huo, Y. (2026). *A comprehensive survey of computer vision methods for spatial transcriptomics*. Briefings in Bioinformatics, 27(3), bbag255.

[J17] Li, X., Cui, C., **Deng, R.,** Tang, Y., Liu, Q., Yao, T., ... & Huo, Y. (2025). *Fine-grained multiclass nuclei segmentation with molecular empowered all-in-SAM model*. Journal of Medical Imaging, 12(5), 057501-057501.

[J16] Wang, Y., Yang, H., **Deng, R.,** Huo, Y., Liu, Q., Shyr, Y., & Zhao, S. (2025). *stImage: a versatile framework for optimizing spatial transcriptomic analysis through customizable deep histology and location informed integration*. Briefings in Bioinformatics, 26(5), bbaf429.

[J15] Zhu, J., **Deng, R.,** Guo, J., Yao, T., Xiong, J., Qu, C., ... & Huo, Y. (2025). *Img2ST-Net: efficient high-resolution spatial omics prediction from whole-slide histology images via fully convolutional image-to-image learning*. Journal of Medical Imaging, 12(6), 061410-061410.

[J14] Xiong, J., **Deng, R.,** Yue, J., Lu, S., Guo, J., Lionts, M., ... & Huo, Y. (2025). *ZeroReg3D: a zero-shot registration pipeline for 3D consecutive histopathology image reconstruction*. Journal of Medical Imaging, 12(4), 044002-044002.

[J13] Cui, C., Zheng, X., **Deng, R.,** Liu, Q., Yao, T., Wilson, K. T., ... & Huo, Y. (2025). *Quantitative benchmarking of anomaly detection methods in digital pathology images*. Machine Learning: Health, 1(1), 010502.

[J12] Guo, J., Zimmer-Dauphinee, J. R., Nieusma, J. M., Lu, S., Liu, Q., **Deng, R**., ... & Huo, Y. (2025). DeepAndes: *A Self-Supervised Vision Foundation Model for Multi-Spectral Remote Sensing Imagery of the Andes.* IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing.

[J11] Yue, J., Yao, T., **Deng, R.,** Lu, S., Guo, J., Liu, Q., ... & Huo, Y. (2024). *GloFinder: AI-empowered QuPath Plugin for WSI-level Glomerular Detection, Visualization, and Curation*. Journal of Pathology Informatics, 17, 100433.

[J10] Yu, L., Yin, M., **Deng, R.,** Liu, Q., Yao, T., Cui, C., ... & Huo, Y. (2024). *Glo-In-One-v2: Holistic Identification of Glomerular Cells, Tissues, and Lesions in Human and Mouse Histopathology.* Journal of Medical Imaging, 12(6), 061406-061406.

[J9] Remedios, L. W., Bao, S., Remedios, S. W., Lee, H. H., Cai, L. Y., Li, T., ... **Deng, R.,** … & Landman, B. A. (2024). *Data-driven nucleus subclassification on colon hematoxylin and eosin using style-transferred digital pathology.* Journal of Medical Imaging, 11(6), 067501-067501.

[J8] Guo, J., Lu, S., Cui, C., **Deng, R.,** Yao, T., Tao, Z., ... & Huo, Y. (2025). Evaluating cell AI foundation models in kidney pathology with human-in-the-loop enrichment. Communications Medicine, 5(1), 495.

[J7] Xiong, J., Nguyen, E. H., Liu, Y., **Deng, R.,** Tyree, R. N., Correa, H., ... & Huo, Y. (2025). *Circle Representation for Medical Instance Object Segmentation*. Machine Learning for Biomedical Imaging, 2025, 545-558.

[J6] Yao, T., Rheault, F., Cai, L. Y., Nath, V., Asad, Z., Newlin, N., ... **Deng, R.,** ... & Huo, Y. (2024). *Robust fiber orientation distribution function estimation using deep constrained spherical deconvolution for diffusion-weighted magnetic resonance imaging.* Journal of Medical Imaging, 11(1), 014005-014005.

[J5] Yao, T., Qu, C., Long, J., Liu, Q., **Deng, R.,** Tian, Y., ... & Huo, Y. (2022). *Compound Figure Separation of Biomedical Images: Mining Large Datasets for Self-supervised Learning.* The journal of machine learning for biomedical imaging, 1.

[J4] Nguyen, E. H., Yang, H., **Deng, R.,** Lu, Y., Zhu, Z., Roland, J. T., ... & Huo, Y. (2021). *Circle representation for medical object detection.* IEEE transactions on medical imaging, 41(3), 746-754.

[J3] Liu, Q., Gaeta, I. M., Zhao, M., **Deng, R.,** Jha, A., Millis, B. A., ... & Huo, Y. (2021). *ASIST: annotation-free synthetic instance segmentation and tracking by adversarial simulations.* Computers in biology and medicine, 134, 104501.

[J2] Huo, Y., **Deng, R.,** Liu, Q., Fogo, A. B., & Yang, H. (2021). *AI applications in renal pathology.* Kidney international, 99(6), 1309-1320.

[J1] Jha, A., Yang, H., **Deng, R.,** Kapp, M. E., Fogo, A. B., & Huo, Y. (2021). *Instance segmentation for whole slide imaging: end-to-end or detect-then-segment.* Journal of Medical Imaging, 8(1), 014001-014001.

Highly Selective Conference

[C88] Liu, F., Saluja, R., Kwak, S., Wang, R., **Deng, R.,** Kim, H., ... & Sabuncu, M. R. (2026). *MAdam: Metric-Aware Multi-Objective Adam.* In Advances in Neural Information Processing Systems (NeurIPS).

[C87] Zhao, L., Shi, T., Reisenbüchler, D., He, X., Zhu, J., Yao, T., ... & **Deng, R.** (2026). *MORI-Seg: Learning Morphological Geometry for Instance Segmentation without Instance Annotations.* In International Conference on Medical Image Computing and Computer-Assisted Intervention. **(Early accept, top 9%, Oral presentation)**

[C86] Nizam, N. B., Liu, F., Kwak, S., Nguyen, M., **Deng, R.,** & Sabuncu, M. R. (2026). *ShapKO: Shapley-Adaptive Modality Knockout for Robust Multimodal Learning.* In International Conference on Medical Image Computing and Computer-Assisted Intervention.

[C85] Saluja, R., Cihangir, A., **Deng, R.,** Paetzold, J. C., Liu, F., & Sabuncu, M. R. (2026). *BackSplit: The Importance of Sub-dividing the Background in Biomedical Lesion Segmentation.* In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition.

[C84] Reisenbüchler, D., **Deng, R.,** Matek, C., Feuerhake, F., & Merhof, D. (2025). *Top-Down Attention-Based Multiple Instance Learning for Whole Slide Image Analysis.* In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 651-660). Springer.

[C83] Zhu, J., **Deng, R.,** Yao, T., Xiong, J., Qu, C., Guo, J., ... & Huo, Y. (2025). *ASIGN: An Anatomy-aware Spatial Imputation Graphic Network for 3D Spatial Transcriptomics.* In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition.

[C82] **Deng, R.,** Liu, Q., Cui, C., Yao, T., Xiong, J., Bao, S., ... & Huo, Y. (2024, October). *HATs: Hierarchical Adaptive Taxonomy Segmentation for Panoramic Pathology Image Analysis.* In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 155-166). Cham: Springer Nature Switzerland.

[C81] **Deng, R.,** Liu Q.,Cui C., Yao T., Yue J., Xiong J., Yu L., Wu Y., … & Huo, Y. (2024). *PrPSeg: Universal Proposition Learning for Panoramic Renal Pathology Segmentation.* In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (pp. 11736-11746).

[C80] **Deng, R.,** Li, Y., Li, P., Wang, J., Remedios, L. W., Agzamkhodjaev, S., ... & Huo, Y. (2023, October). *Democratizing Pathological Image Segmentation with Lay Annotators via Molecular-Empowered Learning.* In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 497-507). Cham: Springer Nature Switzerland.

[C79] Cui, C., Liu, H., Liu, Q., **Deng, R.,** Asad, Z., Wang, Y., ... & Huo, Y. (2022, September). *Survival Prediction of Brain Cancer with Incomplete Radiology, Pathology, Genomic, and Demographic Data.* In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 626-635). Cham: Springer Nature Switzerland.

[C78] Liu, Q., Louis, P. C., Lu, Y., Jha, A., Zhao, M., **Deng, R.,** ... & Huo, Y. (2021). Simtriplet: *Simple triplet representation learning with a single gpu.* In Medical Image Computing and Computer Assisted Intervention–MICCAI 2021: 24th International Conference, Strasbourg, France, September 27–October 1, 2021, Proceedings, Part II 24 (pp. 102-112). Springer International Publishing.

[C77] Yang, H., **Deng, R.,** Lu, Y., Zhu, Z., Chen, Y., Roland, J. T., ... & Huo, Y. (2020). *CircleNet: Anchor-free glomerulus detection with circle representation.* In Medical Image Computing and Computer Assisted Intervention–MICCAI 2020: 23rd International Conference, Lima, Peru, October 4–8, 2020, Proceedings, Part IV 23 (pp. 35-44). Springer International Publishing.

Full Length Conference (First & corresponding author)

[C76] Hsiao, D.-J., Hasko, G., Zhao, L., Wang, L., Yang, Y., Zhu, Y., ... & **Deng, R.** (2027). *Training-Dynamics-Guided Correction of Noisy Annotations for Cell Segmentation in Digital Pathology.* In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C75] Wang, L., Hsiao, D.-J., Nizam, N., Liu, F., Zhu, Z., Kubiak, J., ... & **Deng, R.** (2027). *GCMA: Gated Cross-Modality Attention for IFE-Centered Multimodal Classification*. In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C74] Shi, T., Yang, Y., Zhao, L., Reisenbüchler, D., Jin, J., Muthukumar, T., ... & **Deng, R.** (2027). *Interpretable Multiple-Instance Learning of Glomerular Pathomics and Subtype Ratios for eGFR Classification*. In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C73] Qian, H., Nizam, N., Zhu, J., Zhu, Z., Qu, C., Cannon, J., ... & **Deng, R.** (2027). *DNA Methylation-Component Regression for Tumor Lineage Classification from H&E Whole-Slide Images*. In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C72] Zhu, Z., Zhu, J., Liu, F., Yao, T., Xu, G., Cannon, J., ... & **Deng, R.** (2027). *Benchmarking Active Spot Selection for Cost-Efficient Spatial Transcriptomics*. In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C71] Hasko, G., Saluja, R., Shi, T., Zhao, L., Yang, Y., Reisenbuechler, D., ... & **Deng, R.** (2027). *Seeing Abnormal from Normal: Glomerular Abnormality in Representations of Normal Renal Morphology.* In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C70] Wei, E., Jiang, B., Zhu, Y., Reisenbüchler, D., Ikemura, K., Salvatore, S., ... & **Deng, R.** (2027). *StainBridge: Stain-Aware Pairwise Registration of Serial Renal Biopsy Whole-Slide Images Across Structural and Immunohistochemical Stains*. In Medical Imaging 2027: Digital and Computational Pathology. SPIE.

[C69] Fang, H., Reisenbüchler, D., Ikemura, K., Sabuncu, M., Yang, Y., & **Deng, R.** (2026). *CoFi: a fast coarse-to-fine few-shot pipeline for glomerular basement membrane segmentation.* In Medical Imaging 2026: Digital and Computational Pathology (Vol. 13932, pp. 218-225). SPIE.

[C68] Zhao, L., Yang, Y., Zhu, Y., Guo, J., Yang, H., Huo, Y., Simonson, P. D., Ikemura, K., Sabuncu, M. R., Yang, Y., & **Deng, R.** (2026). *DyMorph-B2I: dynamic and morphology-*

guided binary-to-instance segmentation for renal pathology. In Medical Imaging 2026: Digital and Computational Pathology (Vol. 13932, pp. 208-217). SPIE.

[C67] Guo, Z., Saluja, R., Fang, H., Yao, T., Liu, Q., Huo, Y., Liechty, B., Pisapia, D. J., Ikemura, K., Sabuncu, M. R., Yang, Y., & **Deng, R.** (2026). *Glo-VLMs: leveraging vision-language models for fine-grained diseased glomerulus classification.* In Medical Imaging 2026: Digital and Computational Pathology (Vol. 13932, pp. 54-61). SPIE.

[C66] Shi, T., He, X., Fang, H., Ikemura, K., Sabuncu, M. R., Yang, Y., & **Deng, R.** (2026). *M³-GloDets: Multi-region and multi-scale analysis of fine-grained diseased glomerular detection.* In Medical Imaging 2026: Digital and Computational Pathology (Vol. 13932, pp. 258-266). SPIE.

[C65] **Deng, R.,** Yang, Y., Pisapia, D. J., Liechty, B., Zhu, J., Xiong, J., ... & Sabuncu, M. R. (2025). *CASC-AI: Consensus-aware Self-corrective Learning for Cell Segmentation with Noisy Labels.* In International Conference on Medical Imaging with Deep Learning 2025. **(Oral presentation)**

[C64] **Deng, R.,** Shaikh, N., Shannon, G., & Nie, Y. (2024, April). *Cross-modality Attention-based Multimodal Fusion for Non-small Cell Lung Cancer (NSCLC) Patient Survival Prediction.* In Medical Imaging 2024: Digital and Computational Pathology (Vol. 12933, pp. 46-50). SPIE. **(SPIE Medical Imaging All-Conference Best Student Paper Award Finalist)**

[C63] Li, X., **Deng, R.,** Tang, Y., Bao, S., Yang, H., & Huo, Y. (2024, April). *Leverage Weakly Annotation to Pixel-wise Annotation via Zero-shot Segment Anything Model for Molecular-empowered Learning.* In Medical Imaging 2024: Digital and Computational Pathology (Vol. 12933, pp. 133-139). SPIE. **(Co-first author, SPIE Medical Imaging All-Conference Best Student Paper Award Finalist)**

[C62] Hu, F., **Deng, R.,** Bao, S., Yang, H., & Huo, Y. (2024, April). *Multi-scale Multi-site Renal Microvascular Structures Segmentation for Whole Slide Imaging in Renal Pathology.* In Medical Imaging 2024: Digital and Computational Pathology (Vol. 12933, pp. 310-316). SPIE. **(Co-first author)**

[C61] **Deng, R.,** Cui, C., Liu, Q., Yao, T., Remedios, L. W., Bao, S., ... & Huo, Y. (2023). *Segment anything model (sam) for digital pathology: Assess zero-shot segmentation on whole slide imaging.* In International Conference on Medical Imaging with Deep Learning Short Paper Track. **(Co-first author)**

[C60] Leng, H., **Deng, R.,** Asad, Z., Womick, R. M., Yang, H., Wan, L., & Huo, Y. (2023, April). *An accelerated pipeline for multi-label renal pathology image segmentation at the whole slide image level.* In Medical Imaging 2023: Digital and Computational Pathology (Vol. 12471, pp. 174-179). SPIE. **(Co-first author)**

[C59] Li, P., **Deng, R.,** & Huo, Y. (2023, April). *An end-to-end pipeline for 3D slide-wise multi-stain renal pathology registration.* In Medical Imaging 2023: Digital and Computational Pathology (Vol. 12471, pp. 96-101). SPIE. **(Co-first author)**

[C58] **Deng, R.,** Liu, Q., Cui, C., Asad, Z., & Huo, Y. (2022, December). *Single Dynamic Network for Multi-label Renal Pathology Image Segmentation.* In International Conference on

Medical Imaging with Deep Learning (pp. 304-314). PMLR.

[C57] **Deng, R.,** Cui, C., Remedios, L. W., Bao, S., Womick, R. M., Chiron, S., ... & Huo, Y. (2022, September). *Cross-Scale Attention Guided Multi-instance Learning for Crohn's Disease Diagnosis with Pathological Images.* In International Workshop on Multiscale Multimodal Medical Imaging (pp. 24-33). Cham: Springer Nature Switzerland.

[C56] **Deng, R.,** Yang, H., Asad, Z., Zhu, Z., Wang, S., Wheless, L. E., ... & Huo, Y. (2022, April). *Dense multi-object 3D glomerular reconstruction and quantification on 2D serial section whole slide images.* In Medical Imaging 2022: Digital and Computational Pathology (Vol. 12039, pp. 83-90). SPIE.

[C55] **Deng, R.,** Liu, Q., Bao, S., Jha, A., Chang, C., Millis, B. A., ... & Huo, Y. (2021). *CaCL: Class-Aware Codebook Learning for Weakly Supervised Segmentation on Diffuse Image Patterns.* In Deep Generative Models, and Data Augmentation, Labelling, and Imperfections: First Workshop, DGM4MICCAI 2021, and First Workshop, DALI 2021, Held in Conjunction with MICCAI 2021, Strasbourg, France, October 1, 2021, Proceedings 1 (pp. 93-102). Springer International Publishing.

Full Length Conference (Co-author)

[C54] Wu, R., Guo, J., **Deng, R.,** Wang, Y., Zhao, S., Yang, H., & Huo, Y. (2026). *Comprehensive Evaluation and Fine-Tuning of Foundational Cell Nuclei Segmentation Models in Renal Pathology.* arXiv preprint arXiv:2610.07711.

[C53] Wang, R., Guo, J., Lu, S., **Deng, R.,** Lu, Z., Zhu, Y., ... & Huo, Y. (2026, April). *Evaluating new AI cell foundation models on challenging kidney pathology cases unaddressed by previous foundation models.* In Medical Imaging 2026: Digital and Computational Pathology (Vol. 13932, pp. 69-78). SPIE.

[C52] Zhu, J., **Deng, R.,** Guo, J., Yao, T., Qu, C., Xiong, J., ... & Huo, Y. (2025). *SCR2-ST: Combine Single Cell with Spatial Transcriptomics for Efficient Active Sampling via Reinforcement Learning.* In International Conference on Medical Imaging with Deep Learning (MIDL), 2026. **(Spotlight presentation)**

[C51] Yang, Y., Guo, J., **Deng, R.,** Zhu, J., Lu, Z., Qu, C., ... & Huo, Y. (2026). *Explainable Pathomics Feature Visualization via Correlation-aware Conditional Feature Editing.* In International Conference on Medical Imaging with Deep Learning (MIDL), 2026. **(Oral presentation)**

[C50] Li, X., Zhu, Y., **Deng, R.,** Wei, W. Q., Wang, Y., Zhao, S., ... & Huo, Y. (2026, April). *MedFoundationHub: a lightweight and secure toolkit for deploying medical vision language foundation models.* In Medical Imaging 2026: Image Perception, Observer Performance, and Technology Assessment (Vol. 13928, pp. 238-247). SPIE.

[C49] Zhu, Y., Xiong, J., **Deng, R.,** Wang, Y., Wang, Y., Zhao, S., ... & Huo, Y. (2026, April). *How close are we? Limitations and progress of AI models in Banff lesion scoring.* In Medical Imaging 2026: Digital and Computational Pathology (Vol. 13932, pp. 6-15). SPIE.

[C48] Zhu, J., **Deng, R.,** Guo, J., Yao, T., Qu, C., Xiong, J., ... & Huo, Y. (2026). *DUET: Dual-Paradigm Adaptive Expert Triage with Single-cell Inductive Prior for Spatial*

Transcriptomics Prediction. In International Workshop on Medical Imaging Analysis for Spatial Omics (MISO), MICCAI 2026 (LNCS 17252). Springer Nature Switzerland.

[C47] Li, M., Xiong, J., **Deng, R.,** Yao, T., Tyree, R. N., Hiremath, G., & Huo, Y. (2025, April). *Automatic image unfolding and stitching framework for esophageal lining video based on density-weighted feature matching.* In Medical Imaging 2025: Image Processing (Vol. 13406, pp. 636-642). SPIE.

[C46] Li, M., Cui, C., Liu, Q., **Deng, R.,** Yao, T., Lionts, M., & Huo, Y. (2024). *Dataset Distillation in Medical Imaging: A Feasibility Study.* In Medical Imaging 2025: Image Perception, Observer Performance, and Technology Assessment (Vol. 13409, pp. 172-179). SPIE.

[C45] Yu, L., Yin, M., **Deng, R.,** Liu, Q., Yao, T., Cui, C., ... & Huo, Y. (2025, April). *GLAM: glomeruli segmentation for human pathological lesions using adapted mouse model.* In Medical Imaging 2025: Digital and Computational Pathology (Vol. 13413, pp. 240-248). SPIE.

[C44] Bao, S., Wang, Y., Rudravaram, G., Zhang, R., **Deng, R.,** Yu, X., ... & Huo, Y. (2025, April). *Quantitative analysis of colonic epithelial cell aging in a cell-cycle-like model: changes in nucleus and cytoplasm along the crypt axis.* In Medical Imaging 2025: Digital and Computational Pathology (Vol. 13413, pp. 197-204). SPIE.

[C43] Wu, Y., Xiong, J., Yao, T., **Deng, R.,** Guo, J., Yue, J., ... & Huo, Y. (2024). *Cross-organ Deployment of EOS Detection AI without Retraining: Feasibility and Limitation.* In Medical Imaging 2025: Digital and Computational Pathology (Vol. 13413, pp. 249-256). SPIE.

[C42] Zhu, J., Yin, M., **Deng, R.,** Long, Y., Wang, Y., Wang, Y., ... & Huo, Y. (2024). *Cross-Species Data Integration for Enhanced Layer Segmentation in Kidney Pathology.* In Medical Imaging 2025: Digital and Computational Pathology (Vol. 13413, pp. 49-56). SPIE.

[C41] Guo, J., Lu, S., Cui, C., **Deng, R.,** Yao, T., Tao, Z., ... & Huo, Y. (2024). *Assessment of Cell Nuclei AI Foundation Models in Kidney Pathology.* In Medical Imaging 2025: Image Perception, Observer Performance, and Technology Assessment (Vol. 13409, pp. 76-82). SPIE.

[C40] Xiong, J., Li, M., **Deng, R.,** Yao, T., Bao, S., Tyree, R. N., ... & Huo, Y. (2025, April). *Enhanced feature-based image stitching for endoscopic videos in pediatric eosinophilic esophagitis.* In Medical Imaging 2025: Image-Guided Procedures, Robotic Interventions, and Modeling (Vol. 13408, pp. 99-105). SPIE.

[C39] Zhu, J., **Deng, R.,** Yao, T., Xiong, J., Qu, C., Guo, J., ... & Huo, Y. (2025). *MagNet: Multi-Level Attention Graph Network for Predicting High-Resolution Spatial Transcriptomics.* In International Conference on Medical Imaging with Deep Learning 2025. **(Oral presentation)**

[C38] Long, Y., Wu, Z., Su, X., Yu, L., **Deng, R.,** Yang, H., & Huo, Y. (2025). *Towards Fine-grained Renal Vasculature Segmentation: Full-Scale Hierarchical Learning with FH-Seg.* SPIE Medical Imaging 2025.

[C37] Xiong, J., Xiong, H., Liu, Q., **Deng, R.,** Tyree, R. N., Hiremath, G., & Huo, Y. (2025). *Expanding Training Data for Endoscopic Phenotyping of Eosinophilic Esophagitis.* SPIE Medical Imaging 2025

[C36] Liu, Q., Cui, C., **Deng, R.,** Yao, T., Yang, Y., Tang, Y., & Huo, Y. (2025). *Write Sentence with Images: Revisit the Large Vision Model with Visual Sentence*. Electronic Imaging, 37, 1-5.

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[C25] Xiong, J., Liu, Y., **Deng, R.,** Tyree, R. N., Correa, H., Hiremath, G., ... & Huo, Y. (2024, April). *Deep Learning-Based Open Source Toolkit for Eosinophil Detection in Pediatric Eosinophilic Esophagitis.* In Medical Imaging 2024: Digital and Computational Pathology (Vol. 12933, pp. 231-237). SPIE

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[C17] Remedios, L. W., Cai, L. Y., Remedios, S. W., Ramadass, K., Krishnan, A., **Deng, R.,** ... & Landman, B. A. (2023). *Exploring shared memory architectures for end-to-end gigapixel deep learning.* In International Conference on Medical Imaging with Deep Learning Short Paper Track.

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nucleus density from pseudo labels. In Medical Imaging 2023: Digital and Computational Pathology (Vol. 12471, pp. 302-309). SPIE.

[C14] Bao, S., Lee, H. H., Yang, Q., Remedios, L. W., **Deng, R.,** Cui, C., ... & Huo, Y. (2023, April). *Alleviating tiling effect by random walk sliding window in high-resolution histological whole slide image synthesis.* In Medical Imaging with Deep Learning.

[C13] Yao, T., Rheault, F., Cai, L. Y., Nath, V., Asad, Z., Newlin, N., ... **Deng, R.,** ... & Huo, Y. (2023, April). *Deep constrained spherical deconvolution for robust harmonization.* In Medical Imaging 2023: Image Processing (Vol. 12464, pp. 169-176). SPIE.

[C12] Cui, C., Bao, S., Li, J., Deng, R., Remedios, L. W., Asad, Z., ... & Huo, Y. (2023, February). *Influence of cell-type ratio on spatially resolved single-cell transcriptomes using the Tangram algorithm: based on implementation on single-cell and MxIF data.* In Proceedings of SPIE--the International Society for Optical Engineering (Vol. 12471). NIH Public Access.

[C11] Nguyen, E. H., Yang, H., Asad, Z., **Deng, R.,** Fogo, A. B., & Huo, Y. (2022, September). *CircleSnake: Instance Segmentation with Circle Representation.* In International Workshop on Machine Learning in Medical Imaging (pp. 298-306). Cham: Springer Nature Switzerland.

[C10] Liu, Q., Cui, C., **Deng, R.,** Asad, Z., Yao, T., Zhu, Z., & Huo, Y. (2022, September). *Leverage Supervised and Self-supervised Pretrain Models for Pathological Survival Analysis via a Simple and Low-cost Joint Representation Tuning.* In MICCAI Workshop on Resource-Efficient Medical Image Analysis (pp. 75-84). Cham: Springer Nature Switzerland.

[C9] Bao, S., Li, J., Cui, C., Tang, Y., **Deng, R.,** Remedios, L. W., ... & Huo, Y. (2022, September). *MxIF Q-score: Biology-Informed Quality Assurance for Multiplexed Immunofluorescence Imaging.* In International Workshop on Medical Optical Imaging and Virtual Microscopy Image Analysis (pp. 42-52). Cham: Springer Nature Switzerland.

[C8] Zhu, Z., **Deng, R.,** Liu, Q., Asad, Z., Cui, C., Yao, T., & Huo, Y. (2022, July). *Large-Scale Patch-Wise Pathological Image Feature Dataset with a Hardware-agnostic Feature Extraction Tool.* In Annual Conference on Medical Image Understanding and Analysis (pp. 778-786). Cham: Springer International Publishing.

[C7] Yao, T., Lu, Y., **Deng, R.,** Zhu, Z., Asad, Z., Yang, H., ... & Huo, Y. (2022, April). *Self-supervised learning with large-scale web image mining for characterizing glomerular lesions.* In Medical Imaging 2022: Digital and Computational Pathology (Vol. 12039, pp. 160-166). SPIE.

[C6] Nguyen, C., Asad, Z., **Deng, R.,** & Huo, Y. (2022, April). *Evaluating transformer-based semantic segmentation networks for pathological image segmentation.* In Medical Imaging 2022: Image Processing (Vol. 12032, pp. 942-947). SPIE.

[C5] Lu, Y., Jha, A., **Deng, R.,** & Huo, Y. (2022, April). *Contrastive learning meets transfer learning: a case study in medical image analysis.* In Medical Imaging 2022: Computer-Aided Diagnosis (Vol. 12033, pp. 715-722). SPIE.

[C4] Lu, Y., Yang, H., Zhu, Z., **Deng, R.,** Fogo, A. B., & Huo, Y. (2021). *Improve global*

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[C3] Yao, T., Qu, C., Liu, Q., **Deng, R.,** Tian, Y., Xu, J., ... & Huo, Y. (2021). *Compound figure separation of biomedical images with side loss.* In Deep Generative Models, and Data Augmentation, Labelling, and Imperfections: First Workshop, DGM4MICCAI 2021, and First Workshop, DALI 2021, Held in Conjunction with MICCAI 2021, Strasbourg, France, October 1, 2021, Proceedings 1 (pp. 173-183). Springer International Publishing.

[C2] Zhao, M., Liu, Q., Jha, A., **Deng, R.,** Yao, T., Mahadevan-Jansen, A., ... & Huo, Y. (2021). *VoxelEmbed: 3D instance segmentation and tracking with voxel embedding based deep learning.* In Machine Learning in Medical Imaging: 12th International Workshop, MLMI 2021, Held in Conjunction with MICCAI 2021, Strasbourg, France, September 27, 2021, Proceedings 12 (pp. 437-446). Springer International Publishing.

[C1] Zhu, Z., Lu, Y., **Deng, R.,** Yang, H., Fogo, A. B., & Huo, Y. (2020). *Easierpath: an open-source tool for human-in-the-loop deep learning of renal pathology.* In Interpretable and Annotation-Efficient Learning for Medical Image Computing: Third International Workshop, iMIMIC 2020, Second International Workshop, MIL3ID 2020, and 5th International Workshop, LABELS 2020, Held in Conjunction with MICCAI 2020, Lima, Peru, October 4–8, 2020, Proceedings 3 (pp. 214-222). Springer International Publishing.

Peer Reviewed Abstracts

[A10] **Deng, R.,** Fang, H., Zhao, L., Salvatore, S., Sabuncu, M., Seshan, S., & Yang, Y. (2026). *1442 Automated Orthogonally Corrected Quantification of Glomerular Basement Membrane Thickness by Artificial Intelligence: Validation Against Pathologist Measurements.* Laboratory Investigation, 106(3).

[A9] **Deng, R.,** Shi, T., Salvatore, S., Seshan, S., Robinson, B., Sabuncu, M., & Yang, Y. (2026). *1441 AI-Based Identification and Quantification of Global Glomerulosclerosis in Nephrectomy Specimens: Accuracy and Its Predictive Value.* Laboratory Investigation, 106(3).

[A8] Yang, H., Zhong, J., Yin, M., Bhargava, M., Wang, Y., Zhao, S., ... **Deng, R.,** ... & Fogo, A. (2026). *1452 Proximal Tubule-Derived Osteopontin Activates the Local Osteopontin-CD44 Axis to Precondition Glomerular Parietal Epithelial Cells Following Acute Tubular Injury.* Laboratory Investigation, 106(3).

[A7] Yin, M., Yang, Y., Wang, Y., **Deng, R.,** Liu, J., Zhao, S., ... & Yang, H. (2025). *Differential glomerular pathomics and spatial transcriptomics in short and long-looped nephrons: Insights from human and mouse models: Sa-po0005.* Journal of the American Society of Nephrology, 36(10S), 10-1681.

[A6] Yin, M., Zhao, O. S., Wang, Y., Zhao, S., **Deng, R.,** Huo, Y., ... & Fogo, A. B. (2024). *Artificial Intelligence (AI) Reveals Dynamic Morphological Shifts in Parietal Epithelial Cells after Acute Tubular Injury: TH-PO030.* Journal of the American Society of Nephrology, 35(10S), 10-1681.

[A5] Yang, H., Zhong, J., Wang, Y., Zhao, S., Yao, T., **Deng, R.,** ... & Huo, Y. (2024). *WCN24-*

1702 Mesangial Morphomics Analysis in Short-Looped and LongLooped Nephrons Using Artificial Intelligence in Diabetic Nephropathy. Kidney International Reports, 9(4), S331.

[A4] Qi, C., Zhong, J., Fu, B., Wang, Y., Zhao, S., **Deng, R.,** Yao, T., Huo, Y., Yang, H., & Fogo, A. (2024) *Comparative Glomerular Morphomics Analysis in Short-Looped and Long-Looped Nephrons Using Artificial Intelligence in Human Nephrectomy Samples.* In The Annual Meeting of The United States and Canadian Academy of Pathology (USCAP) 2024.

[A3] Zhao, O., Zhao, S., **Deng, R.,** Huo, Y., Zhong, J., Yang, H., & Fogo, A. (2023) *Injured Proximal Tubules Sensitize Glomerular Epithelial Cells to Injury via Local Paired Ligand/Receptor Interactions.* In The Annual Meeting of The United States and Canadian Academy of Pathology (USCAP) 2023.

[A2] Yang, H., **Deng, R.,** Zhao, S., Zhong, J., Huo, Y., & Fogo, A. (2022) *Integration of spatial transcriptomics and morphology in assessing atubular vs connected glomeruli.* Journal of the American Society of Nephrology, 33(11S), 210. (In Kidney Week 2022, the Annual Meeting of the American Society of Nephrology (ASN))

[A1] Yang, H., **Deng, R.,** Huo, Y., & Fogo, A. (2020) *Automated Atubular Glomeruli Detection Using 3D Glomerular Quantification Algorithms.* In Kidney Week 2020, the Annual Meeting of the American Society of Nephrology (ASN).

Patents

[P3] Huo, Y., Yang, H., & **Deng, R.** *Systems and Methods for Pathological Image Segmentation via Molecular-Empowered Learning*, U.S. Patent Application No. 18/967,022.

[P2] **Deng, R.,** Shaikh, N., Shannon, G., & Nie, Y. *Attention-based multimodal-fusion for patient survival prediction*

[P1] **Deng, R.,** Shi, Y. *Diagnosis of Pre-excitation Syndrome Based on Multi-features Extraction of Electrocardiogram*

RESEARCH FUNDING

ACTIVE

- Weill Cornell Medicine, Department of Radiology (PI: **Deng**)
  "Cornell NYC AIMI Fellowship," Award Period: November 2024 – Present
- Weill Cornell Medicine, Clinical and Translational Science Center (PI: Ikemura, Co-PI: **Deng**)
  "CTSC Pilot Award," Award Period: June 2025 – Present
- Weill Cornell Medicine, Center for Translational Pathology (PI: Ikemura, Co-I: **Deng**)
  "CTP Project Award," Award Period: June 2026 – Present

PRESENTATIONS

Invited Talks

- *Clinically Guided Spatial Transcriptomics Prediction.*
  Keynote, Medical Imaging Analysis for Spatial Omics (MISO) Workshop, **MICCAI**, Strasbourg, France, 2026.
- *Knowledge-infused Learning In Computational Pathology.*
  Histopathological Image Analysis workshop, **Association for Pathology Informatics summit**, Minneapolis, MN, 2026
- *CASC-AI: Consensus-aware Self-corrective Learning for Cell Segmentation with Noisy Labels*
  Journal Club at Intelligent Clinical Care Center, **University of Florida**, Gainesville, FL, 2025.
- *Knowledge-infused Learning In Computational Pathology.*
  AI Fellowship Seminar, **Weill Cornell Medicine**, New York, NY, 2024.
- *Knowledge-infused Efficient Learning For Giga-pixel Virtual Microscopy Image.*
  PhD Thesis Madness, **MICCAI**, Vancouver, Canada, 2023
- *Multimodal Learning & Cross-modality Attention-based Multimodal Fusion Patient Survival Prediction*
  Knowledge Sharing Workshop, **Roche Diagnostics Solutions**, Santa Clara, CA, 2023.
- *Knowledge-infused Efficient Learning For Giga-pixel Virtual Microscopy Image.*
  CAMCA AIxMed Seminar, **Massachusetts General Hospital and Harvard Medical School**, Boston, MA, 2022.

Conference Oral Presentations

- *MORI-Seg: Learning Morphological Geometry for Instance Segmentation without Instance Annotations*
  MICCAI, Strasbourg, France, 2026.
- *CASC-AI: Consensus-aware Self-corrective Learning for Cell Segmentation with Noisy Labels*
  Medical Imaging with Deep Learning, Salt Lake City, 2025.
- *Cross-modality Attention-based Multimodal Fusion for Non-small Cell Lung Cancer (NSCLC) Patient Survival Prediction.*
  SPIE Medical Imaging, San Diego, 2024.
- *Leverage Weakly Annotation to Pixel-wise Annotation via Zero-shot Segment Anything Model for Molecular-empowered Learning.*
  SPIE Medical Imaging, San Diego, 2024.
- *High-performance data management for whole slide image analysis in digital pathology.*
  SPIE Medical Imaging, San Diego, 2024.
- *Cell Spatial Analysis in Crohn's Disease: Unveiling Local Cell Arrangement Pattern with Graph-based Signatures.*
  SPIE Medical Imaging, San Diego, 2024.

- *An accelerated pipeline for multi-label renal pathology image segmentation at the whole slide image level.*
  SPIE Medical Imaging, San Diego, 2023.
- *An end-to-end pipeline for 3D slide-wise multi-stain renal pathology registration.*
  SPIE Medical Imaging, San Diego, 2023.
- *Cross-Scale Attention Guided Multi-instance Learning for Crohn's Disease Diagnosis with Pathological Images.*
  MICCAI MMMI Workshop, Singapore, 2022.
- *Dense multi-object 3D glomerular reconstruction and quantification on 2D serial section whole slide images.*
  SPIE Medical Imaging, San Diego, 2022.
- *Self-supervised learning with large-scale web image mining for characterizing glomerular lesions.*
  SPIE Medical Imaging, San Diego, 2022.
- *CaCL: Class-Aware Codebook Learning for Weakly Supervised Segmentation on Diffuse Image Patterns.*
  DGM4MICCAI Workshop, Strasbourg, France, 2021.

LEADERSHIP AND SERVICE

Editorial Service

- Associate Editor, IEEE Journal of Biomedical and Health Informatics (JBHI)
- Publishing Editor, Journal of Machine Learning for Biomedical Imaging (MELBA)
- Guest Editor, Frontiers in Medicine (Research Topic: Foundation Models and Domain Adaptation for Computational Renal Pathology)
- Guest Editor, Journal of Machine Learning for Biomedical Imaging (MELBA), MIDL 2026 Special Issue

Conference Organization Service

- MICCAI 2026 Area Chair
- MICCAI 2026 MISO Workshop, Program Committee
- MIDL 2026 Program Chair
- MICCAI 2025 Area Chair
- CVPR 2025 Medical Computer Vision Workshop Program Committee
- ISBI 2025, Technical Program Committee Reviewer
- MICCAI 2024 MOVI workshop, Program Committee
- MICCAI 2024 KPIs Challenge, Executive Committee
- MIDL 2023, Local Organizing Committee, Virtual Session Volunteer
- MED-NEURIPS 2023, Program Committee
- ICCV CVAMD 2023, Program Committee

- MED-NEURIPS 2022, Program Committee

Journal Reviewing (Selected)

- IEEE Transactions on Medical Imaging (TMI)
- Medical Image Analysis (MedIA)
- Kidney International (KI)
- Nature Communications (NC)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Neural Networks and Learning Systems (TNNLS)
- IEEE Transactions on Image Processing (TIP)
- Proceedings of the National Academy of Sciences (PNAS)
- Computers in Biology and Medicine (CBM)
- IEEE Journal of Biomedical and Health Informatics (JBHI)
- IEEE Transactions on Biomedical Engineering (TBME)
- Journal of Medical Imaging (JMI)
- Journal of Machine Learning for Biomedical Imaging (MELBA)
- Artificial Intelligence in Medicine (AIM)
- Nature Communications Medicine (NCM)
- IEEE Transactions on Geoscience and Remote Sensing (TGRS)
- IEEE Transaction on Mobile Computing (TMC)
- IEEE Transaction on multimedia (TMM)
- Advanced Science (AS)
- Pattern Recognition (PR)
- Scientific Reports (SR)
- Plos One (PO)
- PNAS Nexus (PN)
- Engineering Application of Artificial Intelligence (EAAI)
- IEEE Access

Conference Reviewing

- Conference on Computer Vision and Pattern Recognition (CVPR)
- Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Learning Representations (ICLR)
- AAAI Conference on Artificial Intelligence (AAAI)
- International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)
- International Conference on Medical Image Computing and Computer Assisted Intervention Workshop (MICCAIW)
- International Conference on Medical Imaging with Deep Learning (MIDL)
- IEEE International Symposium on Biomedical Imaging (ISBI)

- IEEE International Conference on Computer Vision Workshop (ICCVW)
- Conference on Neural Information Processing Systems Workshop (NeurIPS Workshops)

Co-mentoring

- Cornell University
  Daniel Reisenbüchler, Visiting PhD, Whole slide imaging analysis
  Ledi Wang, MS CS, Joint SPEP/IFE image understanding for diagnosis
  Duo-Jie Hsiao, MS CS, Agentic AI for cell segmentation with noisy labels
  Kuo Gong, MS CS, Vision-language model for digital pathology diagnosis
  Fanqi Cheng, MS CS, Vision-language model for digital pathology diagnosis
  Leiyue Zhao, MS, Instance segmentation for renal pathology
  Zheyu Zhu, MS, Active learning for cost-efficient spatial transcriptomics
  Zhenhao Guo, BS CS, Fine-tuning VLMs for digital pathology
  Hongjin Fang, BS BME, Few-shot segmentation for renal pathology
  Tianyu Shi, BS CS, Fine-grained diseased glomerular detection
  Greta Hasko, BS Bio Sci, Anomaly detection for diseased glomeruli and tubules
  Ellen Wei, BS, 3D pathology registration and reconstruction
  Helen Qian, BS, Cross-modality understanding for diffuse glioma brain tumors
- Vanderbilt University
  Juming Xiong, MS BME, Circle representation for medical instance segmentation
  Xueyuan Li, MS DS, Foundation model in cell annotation
  Lining Yu, MS CS, Multi-class segmentation for glomerular lesion
  Zheyu Zhu, BS CS, Feature embedding for whole slide imaging
  Peize Li, BS CS, Multi-stain whole slide imaging registration
  Haoju Leng, BS CS, Accelerated segmentation pipeline for kidney whole slide images
  Yanwei Li, BS CS, Molecular-empowered cell annotation
  Saydolimkhon Agzamkhodjaev, BS CS, Undergraduate research credit
  Yilin Liu, BS CS, Cell detection on pathological images
  Ethan Nguyen, BS CS, Nuclei detection on pathological images
  Muhao Liu, BS CS, Kidney layer segmentation
  Franklin Hu, BS CS, Multi-site vessel segmentation for renal pathology

Community Volunteer

- KPMP Publications & Presentations (P&P) Committee
- IEEE EMBS Student Mentoring Program 2023 Ambassador
- VandyHacks Judge