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PERSONAL STATEMENT

Dongxiao Zhu's recent research interests are in Trustworthy AI with applications in health, urban, and social computing with emphasis on adversarial robustness, explainability, safety, security, and ethics. Dr. Zhu receives his PhD degree from University of Michigan, Ann Arbor, in 2006. Currently he is the **Founding Director** of Wayne AI Research Initiative, Director of Trustworthy AI Lab at Wayne State University. Previously he was the **Founder and Inaugural Program Director** of Master Program in AI, and **Director** of Graduate Program in Computer Science at Wayne State University. He has published over 100 peer-reviewed publications and served on program committees (Area Chair, Senior PC or PC) of flagship AI conferences (NuerIPS, ICML, ICLR, AAAI, IJCAI, ACL, EMNLP, CVPR, ECCV, AMIA, MICCAI) and of premier biomedical informatics journals (*Bioinformatics*, *Nucleic Acids Research*, *Journal of Computational Biology*, *Medical Physics*, *Journal of Medical Internet Research*, *BMC Genomics*, and *Frontiers in Genetics*). Alongside **foundational AI research**, Dr. Zhu also pursues **use-inspired AI research** in life, physical and social science domains. He is passionate about leveraging AI for science and social good. And his recent work in developing robust, fair and explainable AI algorithms and systems to ameliorate spatiotemporal mismatch between housing and employment, future of work, and reducing health disparities have been featured in Detroit PBS, WJR radio and Hour Detroit Magazine, just to name a few, manifesting his continuous efforts in achieving the sustainable development goals such as zero hunger, better cyber-social behaviors, good health and well-being, and reduced inequalities in socially vulnerable regions/groups. Dr. Zhu is also deeply engaged in **AI education**. As the program's **Founder** and **Inaugural Director**, he led the efforts to launch Wayne State's M.S. in AI (Algorithm & Software track), regularly teaches foundational AI courses, and actively leads initiatives to **increase AI literacy among faculty and students**, ensuring that the benefits of AI scholarship and practice extend across disciplines.

PRIMARY RESEARCH AREAS

Foundational Trustworthy AI: Adversarial Robustness, Explainability, Interpretability, Safety, Security, and Ethics of Large Language Model (LLM) and Large Vision-Language Model (LVLM)
Use-Inspired AI and Data Science: Social Media Content, Electrical Health Record (EHR), Medical Imaging (CXR/CT/MRI), Geospatial, and Genome/Transcriptome Sequencing data

EMPLOYMENTS

Full/Associate/Assistant Professor of Computer Science, Wayne State University   2011 – Present

Assistant Professor of Computer Science, University of New Orleans   Jan 2008 – August 2011

Biostatistician, Stowers Institute for Medical Research, Kansas City, MO   June 2006 – December 2007

HONORS AND RECOGNITION

- **Excellence in Research Award**, College of Engineering, Wayne State University, 2022
- **Excellence in Teaching Award**, College of Engineering, Wayne State University, 2016
- **Top Cited Article 2020-2021**, Journal of Biophotonics, Wiley, for the article "Deep learning protocol for improved photoacoustic brain imaging"
- **Best Student Paper Award**, AMIA-2020 Clinical Informatics Summit (first authored by my PhD student)
- **Best Paper Award top 3 finalist**, ICMLA-2017
- **Best Poster Award top 3 finalist**, ICMLA-2017

NSF/NIH RESEARCH AWARDS. TOTAL ~12 MILLION, AS PI ~6 MILLION.

NSF/IIS 2504264, *"Collaborative Research: III: Medium: Advancing Large Language Model Unlearning: Foundations and Applications"*, Total: $800,000, 2025 – 2029, **Role: PI**, 33%.

NIH/R61/R331EY037504, *"VisionWay: Accessibility-aware Path Selection for Wayfinding*, Total: $2,700,000, 2025 – 2030, **Role: MPI**, 25%.

HRSA/5U1QHP53070, *"A.G.R.E.E.D. (Applied Gerontology Research and Education to Eliminate Disparities)-GWEP*, Total: $3,000,000, 2024 – 2029, **Role: Co-I**, 10%.

NIH/R33HD105610 *"Severity Predictors Integrating salivary Transcriptomics and proteomics with Multi neural network Intelligence in SARS-CoV2 infection in Children (SPITS MISC)"*, Total Amount: $1,449,684, 2023 – 2025, **Role: MPI**, 33%.

NSF/ITE 2235225, *"NSF Convergence Accelerator Track H: Leveraging Human-Centered AI Microtransit to Ameliorate Spatiotemporal Mismatch between Housing and Employment for Persons with Disabilities.* Total amount: $613,621, 2022-2024, **Role: PI**, 25%.

NSF/IIS 2211897, *"Collaborative Research: HCC: Small: Understanding Online-to-Offline Sexual Violence through Data Donation from Users"*, Total Amount: $600,000, 2022 – 2026, **Role: PI**, 33%.

NIH/R61HD105610, *"Severity Predictors Integrating salivary Transcriptomics and proteomics with Multi neural network Intelligence in SARS-CoV2 infection in Children (SPITS MISC)"*, Total Amount: $1,433,469, 2021 – 2023, **Role: MPI**, 33%.

NSF/CNS 2043611, *"SCC-CIVIC-PG Track A: Leveraging AI-assist Microtransit to Ameliorate Spatiotemporal Mismatch between Housing and Employment."*, Total Amount: $49,898, 2021, **Role: PI**, 25%.

NSF/CNS 1724227, *"S&AS: INT: Autonomous Battery Operating System (ABOS): An Adaptive and Comprehensive Approach to Efficient, Safe, and Secure Battery System Management."*, Total Amount: $1,249,998, 2017-2021, **Role: Senior Personnel**, 10%.

NSF/CNS 1637312, *"S&CC: Promoting a Healthier Urban Community: Prioritization of Risk Factors for the Prevention and Treatment of Pediatric Obesity."*, Total Amount: $199,996, 2016-2018, **Role: co-PI**, 33%.

NSF/CCF 1451316, *"EAGER: A novel algorithmic framework for discovering subnetworks from big biological data."*, Total Amount: $179,989, 2014-2016, **Role PI**, 100%.

NIH/R21LM010137, *"A new informatics paradigm for reconstructing signaling pathways in human disease."*, Total Amount: $440,989, 2009-2011, **Role: PI**, 100%.

NSF/CCF 0939108, *"CPATH: A verification based learning model that enriches CS and related undergraduate programs."*, Total Amount: $300,000, 2009-2012, **Role: co-PI**, 25%.

EDUCATION

Ph.D. in Bioinformatics, **University of Michigan, Ann Arbor**		2006
M.A. in Statistics, **University of Michigan, Ann Arbor**		2005
M.A. in Math concentration on Computer Science, **Eastern Michigan University**, Ypsilanti		2002
M.S. in Microbiology, **Peking University**, Beijing, China		1999
B.S. in Microbiology, **Shandong University**, Jinan, China		1996

SELECTED PUBLICATIONS

Full publications can be found at **Google Scholar**

† my PhD students as the first author.

Foundational AI Research

[1] X. Zhou†, Y. Qiang, S. Z. Zade, D. Zytko, P. Khanduri, and **D. Zhu**, Not All Tokens Are Meant to Be Forgotten," `arXiv preprint arXiv:2506.03142`, 2025.

[2] R. I. Sultan†, H. Zhu, C. Li, and **D. Zhu**, BiPVL-Seg: Bidirectional Progressive Vision-Language Fusion with Global-Local Alignment for Medical Image Segmentation," `arXiv preprint arXiv:2503.23534`, 2025.

[3] Y. Qiang†, X. Zhou, **D. Zhu**, "Learning to Poison Large Language Models During Instruction Tuning.". Preprint.

[4] Y. Qiang†, X. Zhou, **D. Zhu**, "Hijacking Large Language Models via Adversarial In-Context Learning.". Preprint.

[5] P, Khanduri, C, Li, R, Sultan, Y, Qiang, J, Kliewer, **D. Zhu**, "FedDRO: Federated Compositional Optimization for Distributionally Robust Learning.". Preprint.

[6] S. Z. Zade†, Y. Qiang, X. Zhou, H. Zhu, M. A. Roshani, P. Khanduri, and **D. Zhu**, Automatic Calibration for Membership Inference Attack on Large Language Models," `ECAI-25`.

[7] R. Sultan†, C. Li, H. Zhu, P. Khanduri, M. Brocanelli, and **D. Zhu**, GeoSAM: Fine-tuning SAM with Multi-Modal Prompts for Mobility Infrastructure Segmentation," `ECAI-25`.

[8] E. Walquist, I. Datey, W. Zheng, X. Zhou, K. Berishaj, M. McDonald, M. Parkhill, **D. Zhu**, and D. Zytko, Collective Consent: Who Needs to Consent to the Donation of Data Representing Multiple People?," `CSCW-25`.

[9] C. Li†, H. Zhu, R. I. Sultan, P. Khanduri, Y. Qiang, I. Chetty, K. Thind, and **D. Zhu**, MulModSeg: Enhancing Unpaired Multi-Modal Medical Image Segmentation with Modality-Conditioned Text Embedding and Alternating Training," `WACV-25`.

[10] C. Li†, P. Khanduri, Y. Qiang, R. Sultan, I. Chetty, and **D. Zhu**, AutoProSAM: Automated Prompting SAM for 3D Multi-Organ Segmentation," `WACV-25`.

[11] Y. Qiang†, C. Li, P. Khanduri, and **D. Zhu**, "Fairness-aware Vision Transformer via Debiased Self-Attention." `ECCV-24`.

[12] M. Zamiri, Y. Qiang†, F. Nikolaev, **D. Zhu**, and A. Kotov, "Benchmark and Neural Architecture for Conversational Entity Retrieval from a Knowledge Graph," `TheWebConf-24`.

[13] W. Zhang, E. Walquist, I. Datey, X. Zhou, K, Berishaj, M, MacDonald, M, Parkhill, **D. Zhu**, D, Zytko, "Traumatic Data: Applying Trauma-Informed Design to Data Donation of Sexual Violence Experiences to Improve Sexual Risk Detection AI." `CHI-24`.

[14] Y. Qiang†, C. Li, P. Khanduri, **D. Zhu**, "Interpretability-Aware Vision Transformer.". `IJCNN-24`.

[15] Z. Zhu, H. Chen, J. Zhang, X. Wang, Z, Jin, M, Xue, **D. Zhu**, R, Cho, "MFABA: A More Faithful and Accelerated Boundary-based Attribution Method for Deep Neural Networks." `AAAI-24`.

[16] C. Li†, R. Sultan, Y. Qiang, and **D. Zhu**, "FocalUNETR: A Focal Transformer for Boundary-aware Segmentation of CT Images." `MICCAI-23`.

[17] X. Li†, D. Pan, C. Li, Y. Qiang, and **D. Zhu**, "Negative Flux Aggregation to Estimate Feature Attributions." `IJCAI-23`.

[18] X. Li†, X. Li, D. Pan, Y. Qiang, and **D. Zhu**, "Learning Compact Features via In-Training Representation Alignment." `AAAI-23`.

[19] Y. Qiang†, D, Pan, C. Li, X. Li, R. Jang, and **D. Zhu**, "AttCAT: Explaining Transformers via Attentive Class Activation Tokens." `NuerIPS-22`.

[20] Y. Qiang†, C. Li, M. Brocanelli, and **D. Zhu**, "Counterfactual Interpolation Augmentation (CIA): A Unified Approach to Enhance Fairness and Explainability of DNN." `IJCAI-22`.

[21] Y. Qiang[†], TS. Supriya, Kumar, M. Brocanelli, and **D. Zhu**, "Tiny RNN Model with Certified Robustness for Text Classification." `IJCNN-22` (oral presentation).

[22] C. Li[†], Zheng, Dong, N. Fisher, and **D. Zhu**, "Coupling User Preference with External Rewards to Enable Driver-centered and Resource-aware EV Charging Recommendation." `ECML-22`.

[23] D. Pan[†], X. Li, and **D. Zhu**, "Explaining deep neural network models with adversarial gradient integration." `IJCAI-21`.

[24] X. Li[†], X. Li, D. Pan, and **D. Zhu**, "Improving adversarial robustness via probabilistically compact loss with logit constraints." `AAAI-21`.

[25] L. Wang[†] and **D. Zhu**, "Tackling ordinal regression problem for heterogeneous data: sparse and deep multi-task learning approaches. *Data Mining and Knowledge Discovery.*" pp. 1–28, 2021.

[26] D. Pan[†], X. Li, X. Li, and **D. Zhu**, "Explainable recommendation via interpretable feature mapping and evaluation of explainability." `IJCAI-20`.

[27] X. Li[†], X. Li, D. Pan, and **D. Zhu**, "On the learning property of logistic and softmax losses for deep neural networks." `AAAI-20`.

[28] Y. Qiang[†], X. Li, and **D. Zhu**, "Toward tag-free aspect based sentiment analysis: A multiple attention network approach." `IJCNN-20`.

[29] L. Wang[†], Y. Li, J. Zhou, **D. Zhu**, and J. Ye, "Multi-task survival analysis." `ICDM-17`.

[30] X. Li[†] and **D. Zhu**, "Robust feature selection via l2, 1-norm in finite mixture of regression." *Pattern Recognition Letters*, vol. 108, pp. 15–22, 2018.

[31] X. Li[†], **D. Zhu**, and M. Dong, "Multinomial classification with class-conditional overlapping sparse feature groups." *Pattern Recognition Letters*, vol. 101, pp. 37–43, 2018.

[32] L. Wang[†], **D. Zhu**, and M. Dong, "Clustering over-dispersed data with mixed feature types." *Statistical Analysis and Data Mining: The ASA Data Science Journal*, vol. 11, no. 2, pp. 55–65, 2018.

Use-Inspired AI Research

[33] C. Li[†], R. I. Sultan, H. BagherEbadian, Y. Qiang, K. Thind, **D. Zhu**, and I. J. Chetty, Enhancing CT Image Segmentation Accuracy through Ensemble Loss Function Optimization," *Medical Physics*, 2025.

[34] K. Hilai, D. Grubich, M. Akrawi, H. Zhu, R. Zaghloul, C. Shi, M. Do, **D. Zhu**, and J. Zhang, Mechanical Evolution of Metastatic Cancer Cells in 3D Microenvironment," *Small*, 2025.

[35] M. A. Roshani[†], X. Zhou, Y. Qiang, S. Suresh, S. Hicks, U. Sethuraman, and **D. Zhu**, Generative Large Language Model—Powered Conversational AI App for Personalized Risk Assessment: Case Study in COVID-19," *JMIR AI*, 2025.

[36] M. Peivandi, J. Zhang, M. Lu, C. Li, **D. Zhu**, and Z. Kou, Evaluation of the Segment Anything Model (SAM) for Brain Tumor Segmentation," in *IEEE International Symposium on Biomedical Imaging (ISBI) 2024*, IEEE Computer Society, 2024, pp. 1–4.

[37] R. Manwar[†], X. Li, K, Kratkiewicz, **D. Zhu**, and K, Avanaki, "Adaptive coherent weighted averaging algorithm for enhancement of photoacoustic tomography images of brain," *Journal of Biophotonics*, 2023.

[38] C. Li[†], Bagher, HE, Sultan, RI, Elshaikh, M, Movsas, B, **D. Zhu**, and I, Chetty, "A new architecture combining convolutional and transformer-based networks for automatic 3D multi-organ segmentation on CT images," *Medical Physics*, 2023.

[39] W. Zheng, E. Walquist, I. Datey, X. Zhou, K. Berishaj, M. McDonald, M. Parkhill, **D. Zhu**, and D. Zytko, Towards Trauma-Informed Data Donation of Sexual Experience in Online Dating to

Improve Sexual Risk Detection AI," in *Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23)*, ACM, 2023, Article 39:1–39:3.

[40] R. Kabir[†], Remias, S, Wadell, J, and **D. Zhu** "Time-Series fuel consumption prediction assessing delay impacts on energy using vehicular trajectory," *Transportation Research*, 117, 103678, 2022.

[41] X. Li[†], Bagher, HE, Kim, J, **D. Zhu**, and I, Chetty, "An uncertainty-aware deep learning architecture with outlier mitigation for prostate gland segmentation in radiotherapy treatment planning," *Medical Physics*, 50(1), 311-322, 2022.

[42] X. Li[†], J. Hect, M. Thomason, and **D. Zhu**, "Interpreting age effects of human fetal brain from spontaneous fmri using deep 3d convolutional neural networks.' in *2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)*. IEEE, 2020, pp. 1424–1427.

[43] X. Li[†], **D. Zhu**, and P. D. Levy, "Predicting clinical outcomes with patient stratification via deep mixture neural networks." *AMIA Summits on Translational Science Proceedings*, vol. 2020, p. 367, 2020.

[44] X. Li[†], J. Hect, M. Thomason, and **D. Zhu**, "Interpreting age effects of human fetal brain from spontaneous fmri using deep 3d convolutional neural networks.' in *2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)*. IEEE, 2020, pp. 1424–1427.

[45] X. Li[†], R. Cao, and **D. Zhu**, "Vispi: Automatic visual perception and interpretation of chest x-rays." in *International Conference on Medical Imaging with Deep Learning: MIDL 2020*. IEEE, 2020.

[46] X. Li[†], C. Li, and **D. Zhu**, "Covid-mobilexpert: On-device covid-19 patient triage and follow-up using chest x-rays." in *2020 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*. IEEE, 2020, pp. 1063–1067.

[47] X. Li[†], D. Pan[†], and **D. Zhu**, "Defending against adversarial attacks on medical imaging ai system, classification or detection?" in *2021 IEEE 18th International Symposium on Biomedical Imaging (ISBI)*. IEEE, 2021.

[48] X. Li[†] and **D. Zhu**, "Robust detection of adversarial attacks on medical images." in *2020 IEEE 17th International Symposium on Biomedical Imaging (ISBI)*. IEEE, 2020, pp. 1154–1158.

[49] M. Z. Nezhad[†], N. Sadati, K. Yang, and **D. Zhu**, "A deep active survival analysis approach for precision treatment recommendations: Application of prostate cancer." *Expert Systems with Applications*, vol. 115, pp. 16–26, 2019.

[50] L. Wang[†], M. Dong, E. Towner, and **D. Zhu**, "Prioritization of multi-level risk factors for obesity." in *2019 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*. IEEE, 2019.

[51] X. Li[†], **D. Zhu**, and P. D. Levy, "Leveraging auxiliary measures: a deep multi-task neural network for predictive modeling in clinical research." *BMC medical informatics and decision making*, vol. 18, no. 4, p. 126, 2018.

[52] L. Wang[†], **D. Zhu**, E. Towner, and M. Dong, "Obesity risk factors ranking using multi-task learning." in *Biomedical & Health Informatics (BHI), 2018 IEEE EMBS International Conference on*. IEEE, 2018, pp. 385–388.

[53] X. Li[†], **D. Zhu**, M. Dong, M. Z. Nezhad, A. Janke, and P. D. Levy, "Sdt: A tree method for detecting patient subgroups with personalized risk factors." *AMIA Summits on Translational Science Proceedings*, vol. 2017, p. 193, 2017.

[54] M. Z. Nezhad[†], **D. Zhu**, N. Sadati, K. Yang, and P. Levi, "Subic: A supervised bi-clustering approach for precision medicine." in *2017 16th IEEE International Conference on Machine Learning and Applications (ICMLA)*. IEEE, 2017, pp. 755–760.

[55] X. Li[†], **D. Zhu**, and P. Levy, "Predictive deep network with leveraging clinical measure as auxiliary task." in *2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*. IEEE, 2017, pp. 786–791.

[56] L. Wang[†], **D. Zhu**, M. Dong, and Y. Li, "Modeling over-dispersion for network data clustering." in *Machine Learning and Applications (ICMLA), 2017 16th IEEE International Conference on*. IEEE, 2017, pp. 42–49.

[57] M. Z. Nezhad[†], **D. Zhu**, X. Li, K. Yang, and P. Levy, "Safs: A deep feature selection approach for precision medicine." in *Bioinformatics and Biomedicine (BIBM), 2016 IEEE International Conference on*. IEEE, 2016, pp. 501–506.

Bioinformatics & Computational biology

[58] D. Uprety, **D. Zhu**, and H. West, ChatGPT—A promising generative AI tool and its implications for cancer care," *Cancer*, vol. 129, no. 15, pp. 2284–2289, 2023.

[59] S. Hicks, **D. Zhu**, R. Sullivan, and U. Sethuraman. "Saliva microRNA Profile in Children with and without Severe SARS-CoV-2 Infection," *International Journal of Molecular Sciences*, 24(9), p.8175, 2023.

[60] C. Li[†], R. Sullivan, **D. Zhu**, and S. Hicks. "Putting the 'mi' in omics: discovering miRNA biomarkers for pediatric precision care," *Pediatrics Research*, https://doi.org/10.1038/s41390-022-02206-5, 2022.

[61] L. Wang[†], L., Acharya, C. Bai, and **D. Zhu**. "Transcriptome assembly strategies for precision medicine." *Quantitative Biology*, pp 1-11, https://doi.org/10.1007/s40484-017-0109-2.

[62] L. Wang[†], **D. Zhu**, Li, Y and Dong, M. "Poisson-Markov Mixture Model and Parallel Algorithm for Binning Massive and Heterogeneous DNA Sequencing Reads." In the Series of Lecture Notes in Computer Science (ISBRA 2016).

[63] Hou, J., Acharya, L.[†], **D. Zhu**, and Chen, J. An overview of bioinformatics methods for modeling biological pathways in yeast. *Briefings in Functional Genomics*, 15(2), 95-108, 2016.

[64] **D. Zhu**, Deng, N[†], and Bai C[†]. "A Generalized dSpliceType Framework to Detect Differential Splicing and Differential Expression Events Using RNA-Seq." *IEEE Transaction on NanoBioScience*, DOI: 10.1109/TNB.2015.2388593, 2016.

[65] Deng, N[†] and **D. Zhu**, "dSpliceType: a multivariate model for detecting various types of differential splicing events using RNA-Seq." in the proceedings of 2014 International Symposium on Bioinformatics Research and Applications (ISBRA'14).

[66] Deng, N[†], Sanchez, C, Lasky, J, and **D. Zhu**, "Detecting splicing variants from non-differentially expressed genes of human idiopathic pulmoary fibrosis." *PLoS One* 8(7):e68352. doi:10.137/journal.pone.0068352, 2013.

[67] Judeh, T[†], Johnson, C, Kumar, A, and **D. Zhu**, "TEAK: Topological Enrichment Analysis frameworK for detecting activated biological subpathways." Nucleic Acids Res., doi: 10.1093/nar/gks1299. 2013.

[68] Deng, N[†] and **D. Zhu**, "Detecting various types of differential splicing events using RNA-Seq data." in the proceedings of 2013 ACM Conference on Bioinformatics, Computational Biology and Biomedicine (ACM BCB'13).

[69] Nguyen, T[†] and **D. Zhu**, "MarkovBin: An Algorithm to Cluster Metagenomic Reads Using a Mixture Modeling of Hierarchical Distributions." in the proceedings of 2013 ACM Conference on Bioinformatics, Computational Biology and Biomedicine (ACM BCB'13).

[70] Judeh, T[†], Jayyousi T, Reynolds, B and **D. Zhu**, "Gene Set Cultural Algorithm: A Cultural Algorithm Approach to Reconstruct Networks from Gene Sets." in the proceedings of 2013 ACM Conference on Bioinformatics, Computational Biology and Biomedicine (ACM BCB'13).

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[84] D. X. Zhu and Z. S. Qin, Systems biology and metagenomics: a showcase of Chinese bioinformatics researchers and their work," Science China Life Sciences, vol. 57, no. 11, pp. 1051–1053, 2014.

[85] T. Judeh[†], T. Jayyousi, L. Acharya, R. G. Reynolds, and **D. Zhu**, GSCA: Reconstructing biological pathway topologies using a cultural algorithms approach," in *2014 IEEE Congress on Evolutionary Computation (CEC)*, pp. 2206–2213, 2014.

[86] N. Deng[†], C. G. Sanchez, J. A. Lasky, and **D. Zhu**, Detecting splicing variants in idiopathic pulmonary fibrosis from non-differentially expressed genes," PLoS ONE, vol. 8, no. 7, e68352, 2013.

[87] T. Judeh[†], C. Johnson, A. Kumar, and **D. Zhu**, TEAK: Topology Enrichment Analysis frameworK for detecting activated biological subpathways," `Nucleic Acids Research`, vol. 40, no. 13, pp. e94, 2012.

[88] L. Acharya[†], T. Judeh, and **D. Zhu**, A survey of computational approaches to reconstruct and partition biological networks," in *Statistical and Machine Learning Approaches for Network Analysis*, pp. 1–43, 2012.

[89] L. R. Acharya[†], T. Judeh, G. Wang, and **D. Zhu**, Optimal structural inference of signaling pathways from unordered and overlapping gene sets," `Bioinformatics`, vol. 28, no. 4, pp. 546–556, 2012.

[90] K. Zhang, A. Edwards, and **D. Zhu**, miRNA-Mediated Relationships between Cis-SNP Genotypes and Transcript Intensities in Lymphocyte Cell Lines," `PLoS ONE`, vol. 7, no. 2, e31429, 2012.

[91] Z. Zhao, T. C. Nguyen, N. Deng, K. M. Johnson, and **D. Zhu**, SPATA: a seeding and patching algorithm for de novo transcriptome assembly," in *2011 IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, pp. 190–195, 2011.

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PRESS COVERAGE

- **Detroit PBS:** *AI for Mobility Project Seeks to Improve Detroit's Public Transit System.* March 2024
- **Hour Detroit:** *How AI Changes the Future of Medicine?* October 2022
- **Scientific American:** *AI assisted diagnosis* February 2019
- **DBusiness:** *AI to Bring Micro-transit to Hourly Workers* February 2021
- **EurekAlert:** *AI to Aid Early Detection of SARS-CoV2 in Children* February 2021

TEACHING EXPERIENCE

- *CSC 5825 Introduction to Machine learning and Applications*, Wayne State University, Winter 2017, Fall 2017/2018/2019/2020/2021/2022/2023/2024
- *CSC 7825 Machine learning*, Wayne State University, Winter 2019/2020/2021/2022
- *CSC 8800 Seminars in Machine learning and AI*, Wayne State University, Winter 2021/2022/2023
- *CSC 8860 Seminars in Computer Vision and Pattern Recognition*, Fall 2017
- *CSC 8890 Graduate Seminars in Computer Science*, Fall 2025
- *CSC 6580 Design and Analysis of Algorithms.* Winter 2015/2016/2017
- *CSC 2110 Computer Science I.* Winter 2012/2013/2014

SELECTED LEADERSHIP ROLES AND SERVICE

- **Founding Director** *Wayne AI Research Initiative*, 2021-Present
- **Founder and Inaugural Program Director: Algorithm and Software track** *Master Program in AI*, Wayne State University, 2022-2024
- **Program Director** *Computer Science Graduate Program*, 2018-2020, 2022-2024, Wayne State University
- **Chair, Computer Science Faculty Search Committee**, 2021-2022, 2023-2024, Wayne State University
- **College of Engineering Representative, University Faculty Senate**, 2023-Present
- **Top-Tier AI Conference AC/SPC/PC** *NuerIPS/ICML/ICLR/CVPR/ECCV/AAAI/IJCAI/ACL/EMNLP/MICCAI/AMIA*
- **Journal Editorship** *BMC Genomics, Frontiers in Genetics, Scientific Reports, Plos One, Smart Health.*

RECENT INVITED TALKS

- "Enhancing Algorithmic Fairness in Deep Learning: Discovering and Mitigating Spurious Feature", Invited Talk at **University of Alabama at Birmingham, School of Medicine**, Oct 2024.
- "Leveraging NAIRR for Enhancing Trustworthy AI", Invited Talk at National AI Research Resource (NAIRR) @ **National Science Foundation**, May 2024.
- "Towards Trustworthy AGI in the Era of Foundation Models – Opportunities, Risks, and Vision" Invited Talk at **National Science Foundation**, Dec 2023.
- "Enhancing Algorithmic Fairness in Deep Learning" Invited Talk at Department of Computer Science and Engineering of **University at Buffalo**, 2023
- "Advancing algorithm fairness: detecting and fixing spurious patterns". Invited Talk at Statistics and Probability Department of **Michigan State University**, Jan 2023.

- "Empowering Explainable Machine Learning through the Lens of Adversarial Robustness and Fairness". Invited Talk at Computer Science and Engineering Department of **Michigan State University**, Nov 2022.