ASHLEY (YE) GAO

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EMPLOYMENT

William & Mary *2023 - Present*
Assistant Professor in Computer Science

EDUCATION

University of Virginia *2019 - 2023*
Advisor: John A. Stankovic
Thesis: *Addressing Realisms Faced by Deep Learning Models in Cyber Physical Systems*
Ph.D. in Computer Science

University of Virginia *2017 - 2019*
M.S. in Computer Science

University of California, San Diego *2012 - 2017*
B.S. in Computer Science
B.A. in Literatures of the World

RESEARCH OVERVIEW

My research direction lies in the field of **affective computing** and **natural language processing (NLP)**.

SERVICES

S5. **Panelist**. National Institute of Health. *2025*
S4. **Associate Editor**. Elsevier Smart Health. *2024 - present*
S3. **Panelist**. National Institute of Health. *2024*
S2. **Panelist**. National Science Foundation. *2024*
S1. **Demo & Poster Chair**. The IEEE/ACM international conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE) *2024*

PROFESSIONAL MEMBERSHIPS

P2. **Association for Computing Machinery (ACM)**. Member. *2025*
P1. **Institute of Electrical and Electronics Engineers (IEEE)**. Member. *2025*

SELECTED PUBLICATIONS

[ICASSP'26] Shi, J., Du, H., He, Y., Hong, Y. A., **Gao, Y.**, "Emotion-Aligned Generation in Diffusion Text-to-Speech Models via Preference-Guided Optimization." 2026 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Barcelona, Spain, May 2026.

[ICASSP'26] Shi, J., Du, H., Hong, Y. A., **Gao, Y.**, "EMO-TTA: Improving Test-Time Adaptation of Audio-Language Models for Speech Emotion Recognition." 2026 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Barcelona, Spain, May 2026.

[ICASSP'26] Shi, J., Du, H., Hong, Y. A., **Gao, Y.**, "Plug-and-Play Emotion Graphs for Compositional Prompting in Zero-Shot Speech Emotion Recognition." 2026 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Barcelona, Spain, May 2026.

[ICASSP'26] Mersa, O., Jiang, M., **Gao, Y.**, Li, Q., Zhang, Y., "Hierarchical Convolution Multibranch Transformer for EEG Signals." *Proceedings of the 2026 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Barcelona, Spain, May 2026.

[ICASSP'26] Jiang, M., Chen, Y., Liu, G., Sahu, A., **Gao, Y.**, Zhang, Y., "Pairs, Not Labels: Predicting Protein-Phenotype Associations via Link Prediction." *Proceedings of the 2026 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Barcelona, Spain, May 2026.

[EMNLP'25] Du, H., Shi, J., Myerston, J., Lu, S., Zhou, G., **Gao, Y.**, "Role-Guided Annotation and Prototype-Aligned Representation Learning for Historical Literature Sentiment Classification." The 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP), Suzhou, China, November 2025.

[InterSpeech'25] Du, H., Lu, S., Zhou, G., **Gao, Y.**, EAA: Emotion-Aware Audio Large Language Models with Dual Cross-Attention and Context-Aware Instruction Tuning. InterSpeech 2025.

[InterSpeech'25] Shi, J., Zhang, Y., **Gao, Y.**, CLEP-DG: Contrastive Learning for Speech Emotion Domain Generalization via Soft Prompt Tuning. InterSpeech 2025.

[CHASE'25] Clapham, J., Zhou, M., MacDonald, C., Koltermann, K., **Gao, Y.**, Shao, H., "ElectroMeter: The Practical Electrolyte Measurement System." Connected Health: Applications, Systems and Engineering Technologies (CHASE).

[JMIR'25] Ko, E., **Gao, Y.**, Wang, P., Wijayasingha, L., Wright, K. D., Gordon, K. C., Wang, H., Stankovic, J. A., & Rose, K. M. (2025). Challenges to recruiting dementia caregiving dyads in community-based settings: Lessons learned from an in-home technology-based intervention. JMIR Formative Research, 9(1), e59291. https://doi.org/10.2196/59291

[TMLR'24] Macdonald, C., Chu, Z., Stankovic, J., Zhou, G., Shao, H., **Gao, Y.**, "MiddleGAN: Generating Inter-domain Images with GANs", Transactions on Machine Learning Research.

[CHASE'24] Koltermann, K., Clapham, J., Blackwell, G., Jung W., Burnet, E., **Gao, Y.**, Shao, H., Cloud, L., Pretzer-Aboff, I., Zhou, G., "Gait-Guard: Turn-aware Freezing of Gait Detection for Non-intrusive Intervention Systems," Connected Health: Applications, Systems and Engineering Technologies (CHASE). (**Best Paper Award**.)

[SmartComp'23] **Gao, Y.**, Baucom, B., Gordon, K., Rose, K., Wang, H., Stankovic. "E-ADDA: Unsupervised Adversarial Domain Adaptation Enhanced by a New Mahalanobis Distance Loss for Smart Computing", arXiv preprint arXiv:2201.10001. [Paper]

[INA'22] Rose, K., Gordon, K., Schlegel, E., McCall, M., **Gao, Y.**, Jabbour, J. and Ko, E., 2021. "Pandemic Deployment of a Smarthealth Technology to Improve Stress in Dementia Family Caregivers", Innovation in Aging, 5(Suppl 1), pp.450-450. [Paper]

[HEALTH'21] **Gao, Y**, Salekin, A., Gordon, K., Rose, K., Wang, H. and Stankovic, J., 2021. "Emotion Recognition Robust to Indoor Environmental Distortions and Non-targeted Emotions Using Out-of-distribution Detection", ACM Transactions on Computing for Healthcare (HEALTH), 3(2), pp.1-22. [Paper]

[PERCOM'21] **Gao, Y.**, Jabbour, J., Schlegel, E.C., Ma, M., McCall, M., Wijayasingha, L., Ko, E., Gordon, K., Rose, K., Wang, H. and Stankovic, J., 2021. "Out-of-the-Box Deployment to Support Research on In-Home Care of Alzheimer's Patients", IEEE Pervasive Computing, 21(1), pp.37-47. [Paper]

[JAN'21] Rose, K.M., Coop Gordon, K., Schlegel, E.C., Mccall, M., **Gao, Y.**, Ma, M., Lenger, K.A., Ko, E., Wright, K.D., Wang, H. and Stankovic, J., 2021. "Smarthealth technology study protocol to improve relationships between older adults with dementia and family caregivers", Journal of Advanced Nursing, 77(5), pp.2519-2529. [Paper]

[SENSYS'20] **Gao, Y.**, Ma, M., Gordon, K., Rose, K., Wang, H. and Stankovic, J., 2020, November. "A monitoring, modeling, and interactive recommendation system for in-home caregivers: Demo abstract", In Proceedings of the 18th Conference on Embedded Networked Sensor Systems (pp. 587-588). [Paper]

MENTORING

M2. Jiacheng Shi. Ph.D. student in William & Mary. *2024 - Present*
M1. Hongfei Du. Ph.D. student in William & Mary. *2024 - Present*

WORK EXPERIENCE

W1. Assistant Professor, Department of Computer Science, College of William & Mary. *2023 - Present*

HONORS AND AWARDS

H7. Best Service Award at CHASE'24. *2024*
H6. Best Paper Award at CHASE'24. *2024*
H5. Best Paper Runner-Up Award at SMARTCOMP'23. *2023*
H4. Best Poster at CS Symposium, University of Virginia. *2022*
H3. UVA Computer Science PhD Fellowship, University of Virginia. *2019*
H2. Dept of Comp Sci Academic Excellence Fellowship, University of Virginia. *2017*
H1. Honors with High Distinction, University of California, San Diego. *2016*

REVIEWER SERVICE

S8. Primary Reviewer. ICML, AAAI, ICLR. *2025*
S7. Primary Reviewer. NeurIPS, AAAI, ICLR, ACM Health. *2024*
S6. Primary Reviewer. AAAI, NeurIPS, ICLR. *2023*
S5. Primary Reviewer. IEEE Transactions on Affective Computing. *2022*
S4. Primary Reviewer. AAAI. *2022*
S3. Primary Reviewer. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies. IMWUT/Ubicomp. *2022*
S2. Primary Reviewer. 36th Conference on Neural Information Processing Systems. NeurIPS. *2022*
S1. Primary Reviewer. ACM Transactions on Computing for Healthcare. HEALTH. *2021*

FEATURED

F1. Honors student of the Department of Literature at UCSD. [Webpage] *2016*

REFERENCES

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