Yixue Feng

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Education

University of Southern California *Los Angeles, CA*
PhD Neuroscience *2021 - present*
- Advisor: Dr. Paul M. Thompson
- GPA: 3.87/4

University of Pennsylvania *Philadelphia, PA*
MS Computer and Information Science (CIS) *2019 - 2021*
- Advisor: Dr. Li Shen
- GPA: 3.94/4

University of Virginia *Charlottesville, VA*
BA Computer Science, BA Cognitive Science *2015 - 2019*
- Concentration: Cognitive Psychology
- GPA: 3.77/4

Professional Experience

2019-2021 **Graduate Research Assistant**, Perelman School of Medicine, University of Pennsylvania
2018 **Research Intern**, School of Biomedical Informatics, The University of Texas Health Science Center at Houston
2016-2017 **Undergraduate Research Assistant**, Department of Psychology., University of Virginia

Publications

JOURNAL

Zhang X, **Feng Y**, Li F, Ding J, Tahseen D, Hinojosa E, Chen Y, & Tao C. (2024). *Evaluating MedDRA-to-ICD terminology mappings.* BMC Medical Informatics and Decision Making, 23(S4), 299. [paper] [code]

Feng Y, Kim M, Yao X, Liu K, Long Q, Shen L, & for the Alzheimer's Disease Neuroimaging Initiative. (2022). *Deep multiview learning to identify imaging-driven subtypes in mild cognitive impairment.* BMC Bioinformatics, 23(S3), 402. [paper]

CONFERENCE PROCEEDINGS

Feng Y, Chandio BQ, Villalón-Reina, JE, Thomopoulos SI, Joshi H, Nair G, Joshi AA, Venkatasubramanian G, John JP, & Thompson PM. (2023). *BundleCleaner: Unsupervised Denoising and Subsampling of Diffusion MRI-Derived Tractography Data.* Computational Diffusion MRI (Vol. 14328, pp. 152–164). Springer Nature Switzerland. [paper] [code]

Feng Y, Chandio BQ, Thomopoulos SI, Chattopadhyay T, & Thompson PM. (2023). *Variational Autoencoders for Generating Synthetic Tractography-Based Bundle Templates in a Low-Data Setting.* 2023 45th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC). [paper]

Feng Y, Chandio BQ, Chattopadhyay T, Thomopoulos SI, Owens-Walton C, Jahanshad N, Garyfallidis E, & Thompson PM. (2023). *Learning optimal white matter tract representations from tractography using a deep generative model for population analyses.* 18th International Symposium on Medical Information Processing and Analysis (p. 48). SPIE. [paper] [code] [**Best Virtual Paper Award**]

Feng Y, Kim M, Yao X, Liu K, Long Q, & Shen L. (2020). *Deep Multiview Learning to Identify Population Structure with Multimodal Imaging.* 2020 IEEE 20th International Conference on Bioinformatics and Bioengineering (BIBE), 308–314. [paper]

PREPRINT

Feng Y, Villalon-Reina, JE, Nir TM, Chandio, BQ, Jahanshad N , Thompson PM. (2024). *BundleAGE: Predicting White Matter Age using Along-Tract Microstructural Profiles from Diffusion MRI.* [Preprint, Submitted to to SIPAIM 2024]. Neuroscience. [paper]

Chandio BQ, Villalon-Reina JE, Nir TM, Thomopoulos SI, **Feng Y**, Benavidez S, Jahanshad N, Harezlak J, Garyfallidis E, Thompson PM, the Alzheimer's Disease Neuroimaging Initiative. (2024). *Amyloid, Tau, and APOE in Alzheimer's Disease: Impact on White Matter Tracts.* [Preprint, Submitted to to PSB 2025]. Neuroscience. [paper]

Feng Y, Chandio BQ, Villalon-Reina JE, Benavidez S, Chattopadhyay T, Chehrzadeh S, Laltoo E, Thomopoulos SI, Joshi H, Venkatasubramanian G, John JP, Jahanshad N, & Thompson PM. (2024). *Deep Normative Tractometry for Identifying Joint White Matter Macro- and Micro-structural Abnormalities in Alzheimer's Disease.* [Preprint, Presented at EMBC 2024]. Neuroscience. [paper]

Chandio BQ, Villalon-Reina JE, Nir TM, Thomopoulos SI, **Feng Y**, Benavidez S, Jahanshad N, Harezlak J, Garyfallidis E, & Thompson PM. (2024). *Bundle Analytics based Data Harmonization for Multi-Site Diffusion MRI Tractometry.* [Preprint, Presented at EMBC 2024]. Neuroscience. [paper]

Chattopadhyay T, Joshy NA, Ozarkar SS, Buwa K, **Feng Y**, Laltoo E, Thomopoulos SI, Villalon JE, Joshi H, Venkatasubramanian G, John JP, & Thompson PM. (2024). *Brain Age Analysis and Dementia Classification using Convolutional Neural Networks trained on Diffusion MRI: Tests in Indian and North American Cohorts.* [Preprint, Presented at EMBC 2024]. Neuroscience. [paper]

Homdee N, Boukhechba M, **Feng YW**, Kramer N, Lach J, & Barnes LE. (2019). *Enabling Smartphone-based Estimation of Heart Rate.* ArXiv:1912.08910 [Cs, Eess, Stat]. [paper] [code]

In Review

Feng, Y., Chandio, B. Q., Villalón-Reina, J. E., Thomopoulos, S. I., Nir, T. M., Benavidez, S., Laltoo, E., Chattopadhyay, T., Joshi, H., Venkatasubramanian. G., John, J. P., Jahanshad, N., Jack, C. R., Weiner M. W., Thompson, P. M., for the Alzheimer's Disease Neuroimaging Initiative (2024). *Microstructural Mapping of Neural Pathways in Alzheimer's Disease using Macrostructure-Informed Normative Tractometry.* [Preprint, Accepted to Alzheimer's & Dementia, Special Issue on the 20th Anniversary of ADNI, May 1, 2024]. Neuroscience. [paper] [code]

Honor & Awards

2024	**Generative Artificial Intelligence (GenAI) Research Grant**, University of Southern California	*$50000*
2022	**Best Virtual Paper Award**, 18th International Symposium on Medical Information Processing and Analysis (SIPAIM)	*Valparaíso, Chile*
2021	**Travel Award**, International Conference on Intelligent Biology and Medicine (ICIBM)	*Philadelphia, PA*
2021	**Outstanding Service Award**, Penn Engineering, University of Pennsylvania	*Philadelphia, PA*
2018	**Member, Order of Omega**, University of Virginia	*Charlottesville, VA*

Teaching

2021	**Neuromatch Academy Deep Learning**, Teaching Assistant

Leadership & Service

2020-2021	**CIS Representative**, Engineering Master's Advisory Board, University of Pennsylvania	*Philadelphia, PA*
2019-2021	**Event Coordinator**, Computer and Information Science (CIS) MSE Program, University of Pennsylvania	*Philadelphia, PA*
2017-2018	**Vice President**, Multicultural Greek Council, University of Virginia	*Charlottesville, VA*
2016-2017	**Vice President of External Affairs**, alpha Kappa Delta Phi International Sorority Inc., Sigma Chapter	*Charlottesville, VA*