Juntang Wang

+1 919-201-4521 | juntangw@mit.edu | juntangw.com

Education

Harvard University Aug 2026 – Dec 2027 (expected)

S.M. in Data Science *Cambridge, MA*

- Coursework: MIT Statistical Learning Theory, Computer Vision, Data Science, Wearable FMs and Agentic Systems.
- Thesis: Statistical Learning Theory for Compositional Learning; advisors: Yilun Du, Tomaso Poggio.

Duke University & Duke Kunshan University *(Dual Degree)* Aug 2022 – May 2026

B.S. Applied Math & Comp. Sci. (CS Track) *Durham, NC; Kunshan, China*

- Honors: Distinction (Top 5%) and *cum laude*; GPA: 3.8/4.0 (Duke: 4.0/4.0; Major: 4.0/4.0).
- A^+ Courses: Deep Learning, Machine Learning, Graph-Matrix Analysis, Databases.
- Thesis: Manifold-Informed Neural Network for Low-Data ECG Inference; advisor: Shixin Xu.

Publications

J. Wang, H. Wu, Y. Wang, D. Zou, and S. Xu. Mixing Configurations for Downstream Prediction. *ICML 2026*.

J. Wang, Y. Wang, H. Wu, J. Gao, S. Xu, and D. Zou. StageGuard: Physiologically Constrained Sleep Staging. *KDD 2026*.

J. Wang, Y. Wang, H. Wu, D. Zou, and S. Xu. Brain-Inspired Perspective on Configurations: Unsupervised Similarity and Early Cognition. *BICS 2025 (Oral)*.

S. K. E. Tam, J. Wang, J. Cen, A. Stryjska, P. Grange, and S. C. Kwok. Can the mammalian circadian system adapt to the Martian photoperiod? *18th Annual Meeting of the Chinese Neuroscience Society*, 2025.

Y. Wang, J. Wang, X. Xu, Y. Han, Q. Chen, G. Hussain, and X. Wang. Analyzing temperature-induced phase transitions in $Pb_{10-x}Cu_x(PO_4)_6O$. *17th International Conference on Materials Chemistry*, 2025.

Preprints

J. Wang, Y. Wang, S. Li, H. Wu, D. Zou, and S. Xu. DriftNeRF: Cross-Ray Density Drifting for Sparse-View Neural Radiance Fields. *arXiv 2026*.

J. Wang, H. Wu, Y. Wang, D. Zou, and S. Xu. Manifold-Informed Neural Networks for Low-Label ECG Electrolyte Inference. *arXiv 2026*.

J. Wang, H. Wu, Y. Wang, R. Guo, S. Xu, and D. Zou. Recommending Bacterial Cultivation Conditions from 16S rRNA. *arXiv 2026*.

Research Experience

Graduate Student Researcher Sep 2026 – Present

McGovern Institute for Brain Research at MIT; PI: Tomaso Poggio *Cambridge, MA*

- Deep learning theory: how learning-rate schedules shift the edge of stochastic stability and where optimizers end up.

Research Assistant Sep 2026 – Present

Broad Institute of MIT and Harvard; PI: Rong Ma *Boston, MA*

- Single-cell manifold learning: RNA velocity and perturbation response via optimal transport and spectral methods.

Undergraduate Student Researcher Aug 2022 – May 2026

Duke University & Duke Kunshan University *Durham, NC; Kunshan, China*

AI for Science and Machine Learning; PIs: Shixin Xu, Dongmian Zou *Mar 2025 – May 2026*

- MixConfig (ICML 2026): plug-and-play clustering inductive bias that mixes stable resolutions; gains on 8 benchmarks.
- StageGuard (KDD 2026): semi-Markov decoding for any sleep-staging model; 90%+ fewer implausible stage transitions.

Neuroscience, Summer Research Scholar; PIs: Shu Kit Eric Tam, Sze Chai Kwok *Mar 2025 – Aug 2025*

- CNN for mouse EEG/EMG vigilance-state classification, 90%+ accuracy, benchmarked against 10+ methods.

Graph and Spectral Methods at Duke, Signature Fund; PI: Xiaobai Sun *Jun 2024 – Dec 2024*

- Benchmarked community-detection and clustering algorithms on hyperspectral imaging datasets.
- mheatmap: lead developer of a Python package for proportional heatmaps and spectral reordering (800+ GitHub stars).

Computational Materials Science; PI: Xiawa Wang *Sep 2023 – Mar 2025*

- DFT simulations of temperature-induced phase transitions in LK-99; photoluminescence and exciton dynamics.

Work Experience

Quantitative Researcher, Intern May 2026 – Jul 2026
Proprietary quantitative trading firm (~$1B capital) *Beijing, China*

- Intraday multi-factor models (MLP, GNN, LSTM, Transformer) for next-day A-share returns; built the data and IC pipeline.
- FToken: factors as tokens for cross-sectional return prediction, adding signal complementary to stock-level models.

Machine Learning Engineer, Intern Mar 2026 – May 2026
Siemens Healthineers *Shanghai, China*

- Medical AI: time-series fault diagnosis and LLM-based PII anonymization; delivered 3 projects and 1 POC.
- Pambda: calibrated privacy-level anonymization for LLM/VLM, best utility on 5 of 6 corpora.

Honors and Awards

NeurIPS – Top Reviewer 2026
Kaggle – Bronze Medal, Stanford RNA 3D Folding (Top 8%) 2025
Duke Kunshan University – Summer Research Scholar 2025
Duke Kunshan University – Dean's List with Distinction (Top 10%) 2024
Duke Kunshan University – Signature Fund Award 2024

Teaching

Duke Kunshan University – Teaching Assistant, MATH 302 Numerical Analysis Spring 2025
Duke University – Teaching Assistant, CS 521 Graph-Matrix Analysis (graduate) Fall 2024
Duke Kunshan University – Teaching Assistant, MATH 101 Calculus Fall 2023

Service

Reviewing: NeurIPS 2026, ICML 2027; co-reviewer, CCN 2025
Leadership: Resident Assistant (DKU), Orientation Peer (Duke), Kendo Club Training Leader

Skills

Languages: Python, SQL, MATLAB, Julia, Java, Rust, C, C#, C++
Machine Learning: PyTorch, scikit-learn, pandas
Tools: Git, LaTeX, Linux/Bash, Slurm