Juntang Wang

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EDUCATION

Duke Kunshan University (DKU) & Duke University Dual Degree Class of 2026
B.S. in Applied Math & Computational Science; Computer Science Track (DKU) Kunshan, China
B.S. in Interdisciplinary Studies; Applied Math & Computational Science; Computer Science (Duke). Durham, U.S.

- GPA: 3.8/4.0; Dean's List with Distinction (24FA, 24SP), Dean's List (23FA)
- Courses: Deep Learning (A+), Matrix, Graph, and Network Analysis (A+), Machine Learning (A+), Databases (A+), etc.
- Service: Resident Assistant, Kunshan Student Orientation Peers, Kendo Club Training Leader, etc.

PROJECTS & PUBLICATIONS

- **mheatmap**: A Python package for advanced heatmap visualization and matrix analysis, featuring mosaic heatmap, confusion matrix post-processing, and spectral reordering capabilities. 338 stars
- **pysgtsne**: A Python implementation of the SG-t-SNE-Π algorithm for dimensionality reduction and visualization.
- Shu Kit Eric Tam, Juntang Wang, Sze Chai Kwok. (2025). "Can the mammalian circadian system adapt to the Martian photoperiod?" [Proceeding] *The 34th Annual Computational Neuroscience Meeting (CNS 2025)*.
- Juntang Wang, Hao Wu, Runkun Guo, Yihan Wang, Dongmian Zou, Shixin Xu (2025). "GraMixC: Multi-resolution Graph-based Clustering for Downstream Prediction." [Proceeding] *2025 BIBM.*
- Yihan Wang†, Juntang Wang†, Xinze Xu, Yihen Han, Qinyi Chen, Ghulam Hussain, Xiawa Wang. (2025). "Analyzing Temperature-Induced Phase Transitions in LK-99 ($Pb_{10-x}Cu_x(PO_4)_6O$)." *17th International conference on materials chemistry.*

RESEARCH EXPERIENCE

Graph-based unsupervised methods for time-series analysis Mar - Dec 2025
Signature Work, PI: Prof. Shixin Xu Kunshan, China

- Excelled in a series of capstones and milestones courses. Produced 1 conference paper as side product in the early stage.

Classifying vigilance states in mouse EEG/EMG data Mar - July 2025
Summer Research Scholar, PI: Prof. Shu Kit Eric Tam & Prof. Sze Chai Kwok Kunshan, China

- Developed scripts for automated classification of vigilance states in mouse EEG/EMG data. Produced 1 conference paper.

Unsupervised segmentation for hyperspectral images June - Dec 2024
Summer Research, *RINDSTU @ Duke,* PI: Prof. Xiaobai Sun, Prof. Nikos Pitsianis & Dimitrios Floros Durham, NC

- Achieved SOTA on clustering for hyperspectral images. Highly praised by PI. Proceeding 1 manuscript and 1 thesis.

Data-driven model for AIS reperfusion decision-making Mar - June 2024
Research Assistant, PI: Prof. Shixin Xu Kunshan, China

- Framed a novel ODE/Kernel method for pwiMRI diagnosis. Empowered 1 Kunshan Government-funded project.

Photon & exciton dynamics, photoluminescence, and superconductivity Jan - May 2024
Research Independent Study, PI: Prof. Xiawa Wang Kunshan, China

- Grade A in 4 RINSDSTU courses. Produced 1 conference paper. Developed scripts for DFT, nSCF, Raman, and PL shift.

TEACHING & PROFESSIONAL EXPERIENCE

MATH 302: Numerical Analysis / MATH 101: Calculus Jan - Mar 2025/2024
Teaching Assistant, instructor: Prof. Dangxing Chen Kunshan, China

- Led 6 recitations covering numerical methods and MATLAB/Python implementations

CS 521, 321, MATH 462: Matrix, Graph, and Network Analysis Aug - Dec 2024
Teaching Assistant @ Duke, instructor: Prof. Xiaobai Sun Durham, NC

- First UTA for graduate course, DKU@Duke. Led 7+ recitations and 30+ OH, administrated course, graded homework.

Product Analyst, Intern July - Aug 2023
Second DX Division, NTT Data Wuxi, China

- Highly praised by a CAS lab director. Exceled N1 Japanese training. Produced a field report on software-related companies.

Banker, Intern Jun - July 2023
Business Department, Bank of Huaxia Suzhou, China

- Highly praised by the Bank Chairman. Assisted in the loan department. Perfectly completed 50+ audit reports.

ADDITIONAL INFORMATION

Skills: Python (pytorch), MATLAB, Julia, Java, C/C++, R, Bash, SQL, HTML/CSS, LaTeX, AIGC tools, Unity.
Languages: English (Fluent), Mandarin (Native), Japanese, French.
Interests: ACG, cooking, guitar, gym. Barista (Jun - Aug 2022).