

TAO YANG

Homepage: taoyysc.cn
Email: taoyysc@gmail.com



EDUCATION

Tongji University (TJU)

M.S. in Bioinformatics

Sep. 2024 to Jun. 2027

GPA: 4.57/5.00

Related courses: AI for Biology (88), Bioinformatics Applications (95), Advanced Molecular Biology and Biochemistry (94), Trends in Modern Life Sciences (91).

Shanghai Ocean University (SHOU)

B.S. in Computer Science and Technology

Sep. 2020 to Jun. 2024

GPA: 3.45/4.00

Related courses: Advanced Mathematics (91), Principles of Database Systems (93), C++ Programming (90), Computer Networks (93), Fundamentals of Artificial Intelligence (90).

RESEARCH EXPERIENCE

A direction-aware framework links transcription factor phosphosites to localization and transcriptional output

Mar. 2025 to Jul. 2026

Supervisor: Prof. Menghuan Zhang

- Used LLM-assisted literature review and manual validation to curate TF phosphosites with reported localization effects and define direction labels for nuclear accumulation and cytoplasmic redistribution.
- Developed PhosLoc-Transport, a two-stage framework in which Stage 1 predicts localization-regulatory potential and Stage 2 infers nuclear accumulation or cytoplasmic redistribution direction.
- Outperformed general functional phosphosite predictors on a filtered held-out benchmark, achieving an ensemble AUPRC of 0.480 and AUROC of 0.827.
- Integrated CPTAC phosphoproteomic, proteomic, and RNA-seq data across ten cancer types to evaluate associations between predicted nuclear accumulation-promoting sites and activated TF target-gene expression.

PUBLICATIONS

Tao Yang[†], Kailin Tang, Menghuan Zhang^{*}. A direction-aware framework links transcription factor phosphosites to localization and transcriptional output. Under review at *Science China Life Sciences*. [†]First author; ^{*}Corresponding author.

HONORS AND AWARDS

Graduate Academic Scholarship, Tongji University

Oct. 2024 and Oct. 2025

Shanghai Third Prize, CUMCM, Higher Education Press Cup

Sep. 2023

National Encouragement Scholarship, Ministry of Education of China

2022

TECHNICAL SKILLS

Programming and Workflow Machine Learning

Python, Linux, Bash, Git, Conda, reproducible analysis pipelines
scikit-learn, feature engineering, cross validation, imbalanced classification,
model evaluation

Deep Learning

PyTorch, PyTorch Geometric, graph neural networks, multimodal feature fusion,
representation learning

Research Automation

LLM-assisted literature curation, automated workflows, Python-based data
processing

Languages

English proficiency: CET-4, CET-6