Europass Curriculum Vitae

Personal information

Name / Surname	**Yang, Zhiwen**
Address	Yangzhou University, Yangzhou, China
Personal Email	zhiwenyang2004@gmail.com
Nationality	Chinese

Work experience

Sep 2025–Present	**Research Student**, HKUST(GZ), remote from Guangzhou; benchmarking machine learning models for robustness with strict data-splitting to avoid leakage (Supervisor: Prof. Jun Xia).
Apr 2025–Jul 2025	**Research Intern**, Guomics, Westlake University, Hangzhou, China (PI: Prof. Tiannan Guo); graph neural networks for protein–protein interaction prediction with model evaluation and GO-based validation.
Apr 2025–Jul 2025	**Remote Research Intern**, Laboratory for Proteome Complexity Science; developed PRISM, a deep learning framework for proteomics data imputation.
Sep 2025–Nov 2025	**High School Mathematics Teacher (Internship)**, Taicang Senior High School, Taicang, China; teaching mathematics and assisting with lesson planning and assessment.

Education and training

Sep 2022–Jun 2026	**BSc in Mathematics and Applied Mathematics**, School of Mathematical Sciences (Tianyuan Class), Yangzhou University, China. Focus on applied mathematics, statistics and data analysis.
Jun 2025–Aug 2025	**SDG Global Summer School (non-degree)**, Data Visualisation, College of Computer Science and Technology, Zhejiang University, China (full scholarship).

Personal skills

Languages	**Chinese**: mother tongue. **English**: IELTS 6.5 (overall).
Digital skills	Python (PyTorch, TensorFlow, scikit-learn) for machine learning; MATLAB; R; Linux; LaTeX; Git/GitHub.

Publications and patents

Under review	Z. Li, **Z. Yang**, Y. Chen, T. Guo. "PRISM: A Proteomics Robust Imputation framework for Structure-aware Modeling of missingness", *Nature Communications*, under review (preprint).
2024	**Z. Yang**, X. Guo, J. Huang. "Modeling the relationship between maternal health and infant behavioral characteristics based on machine learning", *PLOS ONE*, 19(8):e0307332.
2024	Z. Fang, **Z. Yang**, X. Zhang, Q. Han. "MedSegKAN: A superior medical image segmentation method based on the improved KAN structure", in *Proceedings of the 16th International Conference on Graphics and Image Processing (ICGIP 2024)*.
2025	**Z. Yang**, L. Zhang. "Coupled algorithm for investigating microplastics' impact on fish using unstructured grids", Chinese Patent CN119558222A.

Honours and awards

Jul 2025	Red Bird Challenge Camp, The Hong Kong University of Science and Technology (Guangzhou).
May 2024–May 2025	*Excellent Project*, National Undergraduate Training Program for Innovation (project lead).
Nov 2024	*Science Pioneer* (top 0.01%, outstanding research contributions), Yangzhou University.
Jul 2024	First Prize, 10th National College Students Statistical Modeling Competition.
May 2024	Honourable Mention, 2024 COMAP Mathematical Contest in Modeling (MCM).
Sep 2023	National Second Prize (top 1.5%), Contemporary Undergraduate Mathematical Contest in Modeling.

Academic activities

Sep 2024–Sep 2025	President, Mathematical Modeling Association, Yangzhou University. Led workshops and competitions to promote mathematical modelling skills among more than 100 students.
Nov 2024	Attendee, *ICGIP 2024* (presented MedSegKAN).

Selected projects

May 2025–Present	**PRISM: Proteomics imputation with deep learning**. Deep learning framework with convolutional autoencoders and matrix factorisation for proteomics data imputation (Python/PyTorch).
Jan 2023–Present	**Advection–diffusion modelling of microplastics and fish populations**. Advection–diffusion modelling on unstructured grids coupled with logistic and Lotka–Volterra models to study ecological impact on predator–prey fish.
Jul 2023–Aug 2024	**Machine learning for infant behavioural data**. Hybrid Random Forest–MLP model (AUC 0.97) plus fuzzy C-means clustering and regression to analyse links between maternal anxiety and infant sleep and behaviour.