

# Dr. Yiming Zhang — Résumé

Ph.D. – University of Nottingham  
Supervisors: Ying Weng, Zhuo Chen, Tom Denning  
🌐 <https://yiming95.github.io>

## Personal Information

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**Date of Birth:** 6th Feb 1995  
**Gender:** Male  
**Nationality:** China  
**Mobile:** (+86) 18701521223  
**Email:** yiming.zhang2@outlook.com

## Education

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**University of Nottingham**  
*Doctor of Philosophy in Computer Science*

**Ningbo, China**  
*Sep 2020 - March 2025*

**University of Melbourne**  
*Master of Information Technology*

**Melbourne, Australia**  
*Feb 2018 - Dec 2019*

**University of Nottingham**  
*Bachelor of Science with Honours in Computer Science, First Class*

**Nottingham, UK**  
*Sep 2013 - July 2017*

## Research Interests

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### Technology-Oriented Research:

- Machine learning
- Deep learning
- Large language models (LLMs)
- Multivariate time series classification
- Explainable AI (XAI) and interpretable machine learning (IML)

### Application-Oriented Research:

- AI applications in healthcare
- Surgical data science, such as automated surgical skill assessment
- Computer-aided diagnosis (e.g., Alzheimer's disease and Parkinson's disease)
- Intelligent modeling of infectious diseases (e.g., COVID-19, Monkeypox)
- Medical image analysis, such as brain tumor detection using MRI

## Teaching Experience

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**University of Nottingham Ningbo China**  
*Teaching Assistant, School of Computer Science*

**Module:** COMP3055 Machine Learning (Undergraduate Level)

**Duties:**

- Led weekly lab tutorials on core machine learning topics and coding practices
- Provided real-time support and code guidance during lab sessions
- Delivered solution walkthroughs with live demos and code explanations in Google Colab
- Recorded and shared post-class videos to support student review
- Responsible for grading final exams

**Module:** COMP4107 Big Data (Postgraduate Level)

Duties:

- Conducted weekly lab tutorials on big data techniques including MapReduce and Spark
- Assisted students with hands-on coding tasks and debugging during lab sessions

## Publications

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1. **Yiming Zhang**, Ying Weng\*, and Jonathan Lund, "Application of Explainable Artificial Intelligence in the Diagnosis and Surgery", *Diagnostics*, vol. 12, no. 2, p. 237, 2022 (**SCI, IF 3.706, ESI Highly Cited Paper, 300+ Citations**).
2. **Yiming Zhang**, Ying Weng\*, and Boding Wang, "CWT-ViT: A Time-Frequency Representation and Vision Transformer-based Framework for Automated Robotic Surgical Skill Assessment", *Expert Systems with Applications*, vol. 258, p. 125064, 2024 (**SCI, IF 7.5, CAS Q1**).
3. **Yiming Zhang**, Ke Chen, Ying Weng\*, Zhuo Chen, Juntao Zhang, and Richard Hubbard, "An Intelligent Early Warning System of Analyzing Twitter Data Using Machine Learning on COVID-19 Surveillance in the US", *Expert Systems with Applications*, vol. 198, 116882, 2022, (**SCI, IF 8.665, CAS Q1**).
4. Ying Weng\*(#), **Yiming Zhang**(#), Wenxin Wang, and Tom Denning, "Semi-supervised Information Fusion for Medical Image Analysis: Recent Progress and Future Perspectives", *Information Fusion*, vol. 106, 102263, 2024, (**SCI, IF 18.6, CAS Q1**). (# co-first author)
5. Ke Chen, Ying Weng\*, Akram Hosseini, Tom Denning, Guokun Zuo and **Yiming Zhang**, "A comparative study of GNN and MLP based machine learning for the diagnosis of Alzheimer's Disease involving data synthesis", *Neural Networks*, 169, 442-452, 2024, (**SCI, IF 7.8, CAS Q1**).
6. Ke Chen, Ying Weng\*, Yueqin Huang, **Yiming Zhang**, Tom Denning, Akram A. Hosseini, and Weizhong Xiao, "A Multi-View Learning Approach with a Diffusion Model to Synthesize FDG PET from MRI T1WI for the Diagnosis of Alzheimer's Disease," *Alzheimer's & Dementia*, 2024 (**SCI, IF 13.1, CAS Q1**).
7. Chengtai Li, **Yiming Zhang**, Ying Weng\*, Boding Wang and Zhenzhu Li, "Natural Language Processing Applications for Computer-Aided Diagnosis in Oncology", *Diagnostics*, vol. 13, no. 2, p. 286, 2023 (**SCI, IF 3.992**).
8. Chengtai Li, Ying Weng\*, **Yiming Zhang** and Boding Wang, "A systematic review of application progress on machine learning-based natural language processing in breast cancer over the past 5 years", *Diagnostics*, vol. 13, no. 3, p. 537, 2023 (**SCI, IF 3.992**).
9. Ying Weng\*, and **Yiming Zhang**, "A Survey of Secure Time Synchronization", *Applied Sciences-Basel*, vol. 13, no. 6, p. 3923, 2023, (**SCI, IF 2.838**).
10. Ran Fei, Ying Weng\*, **Yiming Zhang**, and Jonathan Lund, "Curve based Fast Detail Enhancement for Biomedical Images", *16th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISAPP 2021)*, 8-10 February 2021, Virtual Conference (EI).

## Chinese Patents

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- Ying Weng, Ke Chen, **Yiming Zhang**, A method and system for rating surgical skills based on explainable artificial intelligence, **Granted** on 11th November 2024 (Patent no: 202111287603.0).

## Research Grants

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1. **Project Title:** Heuristic Teaching Mode based on Large Language Model Improves the Programming Teaching in Big Data Course (General Project, Teaching and Learning Comprehensive Reform, Teaching Reform Program of the “14th Five-Year Plan” for General Undergraduate Colleges and Universities in Zhejiang Province)  
**Sponsoring Agency:** Department of Education of Zhejiang Province  
**Role:** Co-Investigator
2. **Project Title:** Intelligent Monitoring and Early Warning Technology for Water Ecological Environment based on Long Short-Term Memory Recurrent Neural Network (Ningbo Commonweal Programme Major Project)  
**Sponsoring Agency:** Ningbo Science & Technology Bureau  
**Role:** Co-Investigator
3. **Project Title:** Research and Clinical Application of Brain Tumor Multi-modality Explainable Artificial Intelligence System based on Medical Image and Digital Pathology(2022Z126, 2022 Ningbo Major S&T Programme)  
**Sponsoring Agency:** Ningbo Science & Technology Bureau  
**Role:** Core Member
4. **Project Title:** Research and Application of Deep Learning based Multi-Camera Optical Perspective Display for Laparoscopy (2019C50052)  
**Sponsoring Agency:** Ningbo Science & Technology Bureau  
**Role:** Core Member

## Awards and Achievements

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- UNNC Doctoral Research Grant (5000 RMB), 2021
- UNNC PhD Scholarship Award - Healthcare Scholarship (492450 RMB), 2020

## Professional Activities

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- Reviewer for Journal of Artificial Intelligence Research
- Reviewer for Cancers
- Reviewer for Artificial Intelligence Review
- Reviewer for Scientific Reports
- Reviewer for Bioengineering
- Reviewer for Diagnostics
- Reviewer for Applied Science
- Reviewer for Biomedicines
- Reviewer for Mathematics
- Reviewer for BMC Medical Informatics and Decision Making
- Reviewer for Algorithms
- Reviewer for Applied Artificial Intelligence
- Reviewer for Data
- Reviewer for Information
- Reviewer for Future Internet
- Reviewer for AI Perspectives & Advances

## Languages

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- **English** [Full Professional Proficiency]
- **Chinese** [Native Proficiency]

## Misc

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- Programming Language –**Python** [good] , C#, Java, JavaScript, Node.js [Basic]
- Knowledge of: **Keras, Tensorflow, PyTorch, Scikit-learn**, Pandas, NumPy, LaTeX, Linux
- Google Scholar: <https://scholar.google.com/citations?hl=en&user=WCKu-ulAAAAJ>
- GitHub: <https://github.com/yiming95>

## List of Referees

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- **Dr. Ying Weng (PhD Lead Supervisor)**  
Associate Professor  
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University of Nottingham Ningbo China  
[Ying.Weng@nottingham.edu.cn](mailto:Ying.Weng@nottingham.edu.cn)
- **Prof. Zhuo Chen (PhD Co-Supervisor)**  
Professor  
School of Economics  
University of Nottingham Ningbo China  
[Zhuo.Chen@nottingham.edu.cn](mailto:Zhuo.Chen@nottingham.edu.cn)
- **Prof. Tom Denning (PhD Co-Supervisor)**  
Professor  
School of Medicine  
University of Nottingham  
[Tom.Denning@nottingham.ac.uk](mailto:Tom.Denning@nottingham.ac.uk)