

# Yiming Zhang | Curriculum Vitae

Ph.D. Candidate

School of Computer Science, University of Nottingham Ningbo China

Supervisors: Ying Weng, Zhuo Chen, Tom Denning

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🌐 <https://research.nottingham.edu.cn/en/persons/yiming-zhang-2>

## Education

**University of Nottingham**

*Doctor of Philosophy*

**Ningbo, China**

*Sep 2020 - Present*

**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

- AI for Healthcare
- Explainable Artificial Intelligence, Interpretable Machine Learning
- Machine Learning, Deep Learning
- Surgical Data Science
- Computer-aided Diagnosis
- Health Informatics
- Medical Image Analysis

## Publications

### Journal Papers

- **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**).
- **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*, 2022, in Press, DOI:10.1016/j.eswa.2022.116882 (**SCI, IF 6.954, CAS Q1**).
- 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**).
- 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**).
- 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**).

### Conference Papers

- 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**).

## Under Review & Prepare to submit (\*equal contribution)

- **Yiming Zhang**, Ying Weng, Tom Denning, Akram Hosseini and Boding Wang, "Example-based Explanations in XAI for Healthcare: Mini-review and Case Study", *prepare to submit*.
- **Yiming Zhang**, Ying Weng, and Boding Wang, "CWT-ViT: A Time-Frequency Representation and Vision Transformer-Based Framework for Automated Surgical Skill Assessment", *prepare to submit*.
- **Yiming Zhang**, Ying Weng, and Boding Wang, "Towards Interpretability for Automated Robotic Surgical Skill Assessment", *prepare to submit*.
- Ke Chen\*, **Yiming Zhang**\*, Ying Weng, and Boding Wang, "A multi-modality surgical skill level classification framework", *prepare to submit*.
- Juntao Zhang\*, **Yiming Zhang**\*, Ying Weng, Tom Denning, and Akram Hosseini, "Applications of machine learning for the computer-aided diagnosis of Parkinson's disease: a systematic review", *under review*.
- Hejia Qiu, Ying Weng, **Yiming Zhang**, Zhuo Chen, and Boding Wang, "Multi-Graph Neural Network (M-GNN) for Predicting COVID-19 Transmission based on Population Mobility", *under review*.
- 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", *under review*.
- Wenxin Wang, Ying Weng, and **Yiming Zhang**, "Application of deep semi-supervised learning in medical image analysis: A systematic review", *prepare to submit*.
- Juexin Zhang, Ying Weng, Rong Huang, and **Yiming Zhang**, "Artificial intelligence-assisted diagnosis of brain tumors through medical imaging: a systematic review", *prepare to submit*.

## 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 (under review, No. CN202111287603.0)

## 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 Bioengineering
- Reviewer for Sustainability
- Reviewer for Diagnostics
- Reviewer for Applied Science
- Reviewer for Biomedicines
- Reviewer for Mathematics
- Reviewer for International Journal of Environmental Research and Public Health
- Reviewer for BMC Medical Informatics and Decision Making
- Reviewer for Algorithms

## 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>

## References

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- **Dr. Zhuo Chen**  
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Health Policy & Management, College of Public Health  
University of Georgia  
[zchen1@uga.edu](mailto:zchen1@uga.edu)
- **Prof. Tom Denning**  
Professor  
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