Yiming Zhang | Curriculum Vitae

Ph.D. Candidate

School of Computer Science, University of Nottingham Ningbo China

Supervisors: Ying Weng, Zhuo Chen, Tom Dening

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Education

University of Nottingham	**Ningbo, China**
Doctor of Philosophy	*Sep 2020 - Present*
University of Melbourne	**Melbourne, Australia**
Master of Information Technology	*Feb 2018 - Dec 2019*
University of Nottingham	**Nottingham, UK**
Bachelor of Science with Honours in Computer Science, First Class	*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*, vol. 198, 116882, 2022, DOI:10.1016/j.eswa.2022.116882 (**SCI, IF 8.665, 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**).

- Ke Chen, Ying Weng, Akram Hosseini, Tom Dening, 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**).

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, and Boding Wang, "CWT-ViT: A Time-Frequency Representation and Vision Transformer-Based Framework for Automated Surgical Skill Assessment", *under review*.

- **Yiming Zhang**, Ying Weng, Boding Wang, Zhenzhu Li, Kai Tang, Tom Dening and Akram Hosseini, "Towards Interpretability for Automated Surgical Skill Assessment: A Comparative Study with Explainable AI", *prepare to submit*.

- **Yiming Zhang**, Ying Weng, Boding Wang Zhenzhu Li and Kai Tang, "Multi-View Time Series Feature Fusion and Case-Based Reasoning for Explainable Automated Surgical Skill Assessment", *under review*.

- Ke Chen*, **Yiming Zhang***, Ying Weng, Boding Wang, Zhenzhu Li and Kai Tang, "A multi-modality surgical skill level classification framework", *prepare to submit*.

- **Yiming Zhang**, Ying Weng, Tom Dening, Akram Hosseini and Boding Wang, "Example-based Explanations in XAI for Healthcare: Mini-review and Case Study", *prepare to submit*.

- Juntao Zhang*, **Yiming Zhang***, Ying Weng, Tom Dening, and Akram Hosseini, "Applications of machine learning for the computer-aided diagnosis of Parkinson's disease: a systematic review", *prepare to submit*.

- Wenxin Wang, **Yiming Zhang**, and Ying Weng, "Semi-supervised information fusion for medical image analysis: recent progress and future perspectives", *under review*.

- Hejia Qiu, **Yiming Zhang**, Ying Weng, Zhuo Chen, and Boding Wang, "Multi-Graph Neural Network (M-GNN) for Predicting COVID-19 Transmission based on Population Mobility", *under review*.

- 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

- 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

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

Professional Activities

- 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
- Reviewer for Applied Artificial Intelligence
- Reviewer for Data
- Reviewer for Information
- Reviewer for Future Internet
- Reviewer for AI Perspectives & Advances
- Reviewer for Atmosphere

Languages

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

Misc

- 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-uIAAAAJ
- GitHub: https://github.com/yiming95

References

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- **Dr. Zhuo Chen**
  Associate Professor
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- **Prof. Tom Dening**
  Professor
  School of Medicine
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