

YANMING CHEN

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EDUCATION

University of Nottingham Ningbo China (UNNC)

Sep 2020 – Jul 2024

B.Sc. Computer Science with Artificial Intelligence (First Class Honours)

GPA: 3.65, Major GPA: 3.82

- Dissertation: Deep Learning Methods of Image Classification and Segmentation and Its Biomedical Applications
- Coursework: Machine Learning, Advanced Mathematics and Statistics, Computer Vision, Algorithms Correctness and Efficiency

Yale University, Yale Summer Session

May 2023 – Aug 2023

- Coursework: Calculus II (A), Introduction to Statistic (A)

RESEARCH EXPERIENCE

Research Assistant, Computer Vision and Intelligent Perception Lab

May 2023 – Present

University of Nottingham Ningbo China

Supervisor: Prof. Sean He

– MambaVesselNet: Hybrid CNN-Mamba Architecture for 3D Cerebrovascular Segmentation

- * Proposed a hybrid model combining CNNs and Mamba SSM to improve cerebrovascular segmentation.
- * Addressed under- and over-segmentation issues and achieved a Dice score of 0.87 on the IXI dataset, outperforming SOTA models.
- * First author of paper accepted at *ACM Multimedia Asia 2024*.

– Multi-Modality Semi-Supervised Learning for Ophthalmic Biomarkers Detection

- * Developed a multi-modal deep learning method integrating clinical labels with OCT scans for biomarker classification.
- * Implemented semi-supervised learning to enhance generalization with limited labeled data.
- * Achieved an F1 score of 0.71 on 3,872 images; results published and presented as first author at *IWAIT 2024*.

Research Assistant, Intelligent Human-Centered Innovation Lab

Jul 2023 – Feb 2024

University of Nottingham Ningbo China

Supervisor: Prof. Xu Sun

– Machine Learning for Motion Sickness Detection in Virtual Reality

- * Developed a machine learning method to classify cybersickness levels using physiological data.
- * Conducted statistical analyses to preprocess data and identify key indicators of cybersickness.
- * Examined biofeedback efficacy through experiments with 40 participants.
- * Co-authored a paper under review at *CSCW 2025*; obtained software copyright.

Research Assistant, UAV Path Planning Project

Jul 2022 – Present

University of Nottingham Ningbo China

Supervisor: Dr. Saeid Pourroostaei Ardakani

– Multi-Objective Reinforcement Learning for UAV Path Planning

- * Developed a Q-learning-based framework for UAV navigation in fire and rescue missions.
- * Optimized trade-offs between energy efficiency, rescue success rates, and collision avoidance.
- * Demonstrated superior performance over benchmarks in complex environments.
- * First author of paper under review at *IEEE Transactions on Vehicular Technology*.

SOFTWARE DEVELOPMENT EXPERIENCE

Software Engineering Intern, Smart Medicine Lab

Jul 2022 – Sep 2023

University of Nottingham Ningbo China

– IoT-based Health Monitoring System for Elderly Users

- * Developed an Android application with an elder-friendly interface for real-time health monitoring.
- * Integrated IoT devices using MQTT protocol for seamless data transfer and analysis.
- * Coordinated with stakeholders to align project objectives and ensure timely delivery; **obtained two software copyrights**.

PRESENTATIONS

Oral Presentations

- MambaVesselNet: Hybrid CNN-Mamba Architecture, *ACM Multimedia Asia 2024*, Auckland, New Zealand
- Multimodality Semi-Supervised Learning for Ophthalmic Biomarker Detection, *IWAIT 2024*, Langkawi, Malaysia

Poster Presentations

- IoT-based Health Monitoring System, *UNNC Interdisciplinary Research and Knowledge Exchange Conference*, October 2023

LEADERSHIP & ACHIEVEMENTS

- **Director, Passing Hope Project (2021 – 2022):** Organized volunteer recruitment and secured football equipment donations for underprivileged children in Yunnan and Guizhou.
- **Volunteer Teacher, Yunnan (Summer 2021):** Taught English and football to underserved middle school students.
- **Certificated National Level-2 Football Athlete (2020 – 2024):** Member of UNNC Football Excel Team and GaoYuan Bao Football Club.

TECHNICAL SKILLS

Programming Languages (Frequently Used): Python, Java, C, SQL

Tools & Frameworks: TensorFlow, PyTorch, Scikit-Learn, PySpark, Matplotlib

Domain Expertise: Medical Image Analysis, Clinical Data Analytics, Machine Learning for Healthcare

Languages: Chinese (Native), English (Fluent; TOEFL 106)