Weihao Dai

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EDUCATION

Northeastern University Shenyang, China
Master of Artificial Intelligence Sep. 2022 - Jun. 2025 (Expected)

- Weighted Average Score: 87.4/100
- Advisor: Prof. Chaolu Feng
- First-Class Scholarship for Outstanding Students (2022, 2023)

Bachelor of Computer Science and Technology Sep. 2018 - Jun. 2022

- Weighted Average Score: 85.9/100
- Second-Class Scholarship for Outstanding Students (top 10%) (2021)
- Third-Class Scholarship for Outstanding Students (top 30%) (2019, 2020)

PUBLICATIONS & MANUSCRIPTS

W. Dai, C. Feng, S. Chen, et al., "What Will Regularized Continuous Learning Performs if It Was Used to Medical Image Segmentation: A Preliminary Analysis," **2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM, CCF B)**, pp. 1860-1863, doi: 10.1109/BIBM58861.2023.10385386

W. Dai, F. Kong, C. Feng, et al., "Left Ventricular Wall Thickness and Systolic Function Quantification for Hypertrophic Cardiomyopathy in Echocardiography," **IEEE Transactions on Medical Imaging (TMI, IF: 10.6), Under Review**

RESEARCH EXPERIENCE

Automated Diagnosis and Prognosis of HCM Based on Echocardiography Oct. 2023 - Present
Graduate Researcher
Key Lab. of Intelligent Computing in Medical Image (MIIC), Ministry of Education *Shenyang, Liaoning*

- Partnered with local hospitals to analyze hypertrophic cardiomyopathy (HCM) echocardiography data
- Proposed a novel ultrasound myocardial segmentation network for HCM patients
- Proposed a training-free, anatomy-driven method to quantify left ventricular from myocardial segmentation
- Developing a multi-modal framework to identify resting or latent obstruction in HCM patients (ongoing)

Regularization-Based Continuous Learning in Medical Image Segmentation Apr. 2023 - Sep. 2023
Graduate Researcher
College of Computer Science and Engineering, Northeastern University *Shenyang, Liaoning*

- Applied five regularization-based continual learning (RCL) methods to eight datasets across two medical image segmentation scenarios to verify their effectiveness
- Described the essence of five RCL methods using a unified Taylor expansion

Feature Dimension Reduction and Classification of Leukemia Gene Expression Oct. 2021 - Apr. 2022
Undergraduate Thesis Advisor: Prof. Chaolu Feng
College of Computer Science and Engineering, Northeastern University *Shenyang, Liaoning*

- Proposed a feature dimensionality reduction CNN and improve the performance of nine classifiers by 3% to 30%

Artificial Intelligence Practicum May 2021 - Aug. 2021
Undergraduate Researcher
College of Computer Science and Engineering, Northeastern University *Shenyang, Liaoning*

- Led a team to optimize the Transformer model for Chinese-English translation

HONORS & AWARDS

- First Prize in Zhibo Technology Artificial Intelligence Practicum (1 out of 12 teams) Aug. 2021
- Third Prize in Zhehang Technology Java Comprehensive Practice Jul. 2021
- Second Prize in Northeastern University Student Programming Competition Apr. 2019

LEADERSHIP & SERVICE

Minister Sep. 2019 - Sep. 2020
Department of Growth and Development, Student Union, Northeastern University *Shenyang, Liaoning*

- Led the monthly evaluation of students' psychological states
- Provided counseling to high-risk students
- Organized regular psychological counseling activities

Member Sep. 2018 - Jun. 2021
Volunteer Association, Northeastern University *Shenyang, Liaoning*

- Completed over 40 hours of volunteer work each semester

SKILLS

Languages Mandarin Chinese (native), English (CET-4, CET-6, preparing for IELTS)
Technical Skills Python, C/C++, Java, PyTorch, OpenCV, Scikit-Learn, Pandas, Stata, etc.