FEI WU

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EDUCATION

Soochow University *Sep 2021 - Present*
Artificial Intelligence GPA: 3.9/4 Rank: 1/90
Relevant Coursework: Machine Vision (95), Linear Algebra (95), Machine Learning (94), Probability and Statistics (94), Deep Learning (93), Data Structure (91), Stochastic Processes (90) et al.

RESEARCH EXPERIENCES

Lightweight ConvNet for Head and Neck Lymph Node Segmentation *Sep 2023- May 2024*
Addressed the complexity and practical application challenges of 3D medical image segmentation models by innovating and improving the commonly used 3D U-Net model in the field:

- Applied Partial Convolution to 3D images and designed a new convolution block

- Used an asymmetric encoder-decoder structure with a larger encoder and smaller decoder

- Designed a lightweight boundary refinement module to improve segmentation accuracy

Interactive Medical Image Processing Software Based on MedSAM *Dec 2022- Nov 2023*
Independently developed from scratch

- Developed the GUI using PyQt and utilized Python for preprocessing medical images

- Employed the latest visual large model: Segment Anything Model (SAM) fine-tuned on medical images to assist doctors in quickly and accurately extracting regions of interest

HONORS AND AWARDS

National 2nd Prize in the 5th Global Campus AI Algorithm Elite Competition *Nov 2023*
2nd Prize in the 14th Lanqiao Cup Python Programming University A Group *Apr 2023*
Soochow University Merit Student *Dec 2022 and Dec 2023*
Soochow University Grand Prize Scholarship (4%) *Dec 2022 and Dec 2023*
Invited to Review for PRICAI2023, Signal Processing, and Medical Physics

RESEARCH INTERESTS

- Machine Learning (Deep Learning)

- Medical Image Analysis

- 3D Vision

PUBLICATIONS

[1] **Fei Wu**, Hao Chen, Quan Li, Tao Peng*. 3D Partial U-Net: A Lightweight ConvNet for Head and Neck Lymph Node Segmentation, 2024 International Conference on Intelligent Computing (ICIC 2024, CCF C). 2024. (Oral Presentation)
[2] Tao Peng, Binbin Tang, **Fei Wu**, Zixuan Teng. 2023. A skin cancer detection device based on the Internet of Things. CN Patent ZL 2023 2 1525162.8, filed June 15, 2023, and issued January 12, 2024.