Chenru Wang

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Education

Ocean University of China   *Shandong, China*
Bachelor of Mathematics and Applied Mathematics   *Sept.2021 – Jun.2025*

- Overall GPA: 3.2/4(82.9/100)
- Rank: 9/49

Core Courses:
Real Analysis(92), Optimization(96), Time Series Analysis(95), Ordinary Differential Equations(88), Partial Differential Equation(87), Bioinformatics(91), Python(98), MATLAB Programming(98)

Research Interests

Optimization algorithms, Computational neuroscience.

Publications

Wang, C., Chen, Z., Li, M., Yin, H., Zhou, S., Zhang, J., Zeng, X., & Zhang, Q. (2024). DDUM: Deformable Dilated U-structure Module for Coronary Stenosis Detection. (Under Review)

Research Experience

Research on detection of stenosis of coronary arteries   *Jun.2023 – Apr.2024*
Provincial Training Program of Innovation and Entrepreneurship for Undergraduates
Core Member

- Using deep learning methods to assist physicians with diagnosing coronary artery disease and reducing errors caused by subjective judgment.
- Proposing a module, the Deformable Dilatable U-structure Module, that can specialize a common network for coronary stenosis detection and enhance its generalization ability.
- Developed a new and more complex dataset for the detection of coronary stenosis, named the 302 dataset, to assess and improve the generalization performance of the network.

Research on noise reduction and enhancement methods of cardiac coronary angiography images   *Nov.2022 – Sept.2023*
Core Member

- Using various methods for denoising and enhancing coronary angiography images, and proposing a new hybrid approach.
- Using various deep learning based super-resolution image reconstruction methods and improving them by combining traditional image super-resolution techniques, ultimately resulting in a new super-resolution reconstruction method.

Skills

Programming Language: Python(Pytorch, Opencv, Scikit-learn,etc), C/C++, Matlab, R
Professional Software: LaTex, Lingo, Mathtype, Mathematica, SPSS
Language: English(IELTS - 6.5)

Awards

The Third Prize Scholarship, Ocean University of China(2023 & 2024)

Honorable Mention, Mathematical Contest in Modeling(2023 & 2024)