Gelei Xu

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SUMMARY

- An undergraduate major in Intelligent Science and Technology with GPA 3.64/4, pursuing a Master/PhD. position of artificial intelligence and machine learning
- Abundant research and paper writing experience in medical image processing
- Skilled in mastering and implementing classic machine learning algorithms
- Proficient English skills

EDUCATION

B.A Candidate in Intelligent Science and Technology   Expected Jun. 2023

Department of Computer Science and Technology, Southern University of Science and Technology

RESEARCH EXPERIENCE

Southern University of Science and Technology, research group of Intelligent Medical Imaging

Jun. 2021 - Present

- propose an automatic cortical cataract classification framework based on AS-OCT image using texture features gray-level co-occurrence matrix (GLCM), gray-level size zone matrix (GLSZM) and neighborhood gray tone difference matrix (NGTDM).
- Develop a multimodal based automatic nuclear cataract classification method.
- Participate in *The Ministry of Education national college students' innovative entrepreneurial training program* and build an intelligent diagnosis and screening platform of cataract.

ADDITIONAL EXPERIENCE

Southern University of Science and Technology, course C/C++ Program Design: Sept. 2020 – Jan. 2021
- Build a convolutional neural network for face detection without deep learning framework independently and ranked 10% in the whole class.

Southern University of Science and Technology, course Computer Vision: Sept. 2021 – Jan. 2022
- Incorporate the clinical features into convolutional neural networks to improve glaucoma classification results and enhance the interpretation.

Southern University of Science and Technology, course Machine Learning: Sept. 2021 – Jan. 2022
- Use 3D point cloud to complete classification and segmentation task and achieve high accuracy in Model Net, Shape Net and S3DIS datasets. Apply the result into automatic driving dataset nuscene and receive good segmentation result in practice.

PUBLICATIONS

1. **Gelei Xu**, Xiaoqing Zhang, Zunjie Xiao, Risa Higashita, Wan Chen, Jin Yuan and Jiang Liu. "Automatic Cortical Cataract Classification Framework Based on AS-OCT Images." Journal of Computer Science. (Chinese core journal, accepted)

2. Xiaoqing Zhang, Zunjie Xiao, Lingxi Hu, **Gelei Xu**, Risa Higashita, Wan Chen, Jin Yuan and Jiang Liu. "CCA-Net: Clinical-awareness attention network for nuclear cataract classification in AS-OCT." Knowledge-Based Systems. (SCI in first zone, submitted)

3. A paper submitted to IEEE International Conference on Multimedia and Expo 2022 (double-blind, second author)

SKILLS & INTERESTS

- Languages: IELTS 7.5, Cet-4 579, Cet-6 568. Won the second prize (2021) and third prize (2021) in "FLTRP.ETIC Cup" English Public Speaking Contest offline contest group. Proficient in English reading, listening and speaking.
- Computer Languages: Skilled in programming Python, Java and C++
- Instruments: Pytorch, Sklearn and Microsoft Office, latex
- Interests: singing, reading and contemplate on life.