Yangyang Zheng

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EDUCATION

2020.09 - present   Yangtze University   Data Science and Big Data Technology   (GPA: 85.2/100)

EXPERIENCE

Yangtze University

Key Laboratory of Exploration Technologies for Oil and Gas Resources Ministry of Education   WuHan HuBei

Team members   2021.07 - present

With the guidance of Professor Chong Zhang, I have established an intelligent recognition and classification model for bioclastic carbonates using the transformer network architecture, and its recognition effect has been significantly improved compared with that of the resnet network, enhancing the recognition efficiency of complex carbonates in the field of geological exploration; based on the mean cluster segmentation, I have established a multi-cluster centre and weighted cluster image segmentation algorithm, and used the algorithm to segment the cast thin slice images, and its segmentation results have effectively improved the recognition segmentation effect of the interior and edges of each component in the image compared with the ordinary clustering algorithm.

Yangtze University

Subsurface Modeling and Intelligent Prospecting R&D Center   WuHan HuBei

Team member   2022.09 - present

With the guidance of Professor Guozhong Gao, in order to further improve the accuracy of the point cloud analysis algorithm, inspired by the structure of ResNet and DenseNet, we designed a direct sampling feature transfer method, by directly sampling intermediate features and concatenating the direct sampling results containing multi-process feature information, which is not only more applicable but also effectively improves feature usability, and submitted this research result to NeurlPs2023 as a co-first author.

PROJECTS

Presenter

– Provincial Key Projects for Undergraduate Innovation and Entrepreneurship,Lithological automatic recognition and classification research based on deep learning of thin slice images.(No.S202210489007),2021.09 2023.06: 10,000

Participant

– China University Industry-University Research Innovation Fund,New Generation Information Technology Innovation Project,Depth camera-based object detection and recognition in driverless cars(On application),2022.12 2023.11：20,000

INTERSETING

Machine Learning
Computer Vision
Scene understanding

PUBLICATIONS

Xianzu Wu,**Yangyang Zheng**,Xianfeng Wu,Weifeng Shang,Cheng Meng,Zhou Xie,Yajing Bai, Guozhong Gao,DSNs:Can Direct Sampling Networks make for better Information Flow?(NeurIPS23')(under review)

Zheng Y, Jiao L, Wu W, et al. Petrographic recognition and classification of bioclastic carbonate thin sections based on attention mechanism[J]. Geoenergy Science and Engineering, 2023, 225: 211712.

Zheng Yangyang,Zhang Chong*,Wu Wei,Jiao Liqun,Weighted clustering casting thin slice image segmentation method based on multi-cluster center ,Bulletin of Mineralogy, Petrology and Geochemistry.(accept)

SKILLS

Code	python(pytorch\tensorflow)/matlab
Others	office(word\excel\powerpoint)/latex/github