

1. Record Nr.	UNINA9910799224803321
Autore	Liu Qingshan
Titolo	Pattern Recognition and Computer Vision [[electronic resource] ] : 6th Chinese Conference, PRCV 2023, Xiamen, China, October 13–15, 2023, Proceedings, Part XIII // edited by Qingshan Liu, Hanzi Wang, Zhanyu Ma, Weishi Zheng, Hongbin Zha, Xilin Chen, Liang Wang, Rongrong Ji
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9985-58-7
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (524 pages)
Collana	Lecture Notes in Computer Science, , 1611-3349 ; ; 14437
Altri autori (Persone)	WangHanzi MaZhanyu ZhengWeishi ZhaHongbin ChenXilin WangLiang JiRongrong
Disciplina	006
Soggetti	Image processing - Digital techniques Computer vision Artificial intelligence Application software Computer networks Computer systems Machine learning Computer Imaging, Vision, Pattern Recognition and Graphics Artificial Intelligence Computer and Information Systems Applications Computer Communication Networks Computer System Implementation Machine Learning
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents - Part XIII -- Medical

Image Processing and Analysis -- Growth Simulation Network for Polyp Segmentation -- 1 Introduction -- 2 The Proposed Method -- 2.1 Gaussian Map and Body Map -- 2.2 Overall Architecture -- 2.3 Features Extraction and Fusion Module -- 2.4 Dynamic Attention Guidance Module -- 2.5 Dynamic Simulation Loss -- 3 Experiments -- 3.1 Settings -- 3.2 Comparisons with State-of-the-art -- 3.3 Ablation Study -- 4 Conclusion -- References -- Brain Diffuser: An End-to-End Brain Image to Brain Network Pipeline -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 3.1 Feature Extraction Module -- 3.2 Brain Diffuser -- 3.3 GCN Classifier -- 3.4 Loss Function -- 4 Experiments -- 4.1 Dataset and Preprocessing -- 4.2 Experiment Configuration -- 4.3 Results and Discussion -- 5 Conclusion -- References -- CCJ-SLC: A Skin Lesion Image Classification Method Based on Contrastive Clustering and Jigsaw Puzzle -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 3.1 Overview of Our Method -- 3.2 Contrastive Clustering -- 3.3 Jigsaw Puzzle -- 3.4 Loss Function -- 4 Experiments -- 4.1 Dataset and Evaluation Metrics -- 4.2 Baseline Performance -- 4.3 Ablation Experiment -- 4.4 Analysis -- 5 Conclusion -- References -- A Real-Time Network for Fast Breast Lesion Detection in Ultrasound Videos -- 1 Introduction -- 2 Method -- 2.1 Space Time Feature Aggregation (STA) Module -- 3 Experiments and Results -- 3.1 Comparisons with State-of-the-Arts -- 3.2 Ablation Study -- 3.3 Generalizability of Our Network -- 4 Conclusion -- References -- CBAV-Loss: Crossover and Branch Losses for Artery-Vein Segmentation in OCTA Images -- 1 Introduction -- 2 Methods -- 2.1 Overview -- 2.2 Crossover Loss and Branch Loss -- 2.3 Loss Function -- 3 Experiments -- 3.1 Data -- 3.2 Experimental Settings -- 3.3 Evaluation Metrics. 3.4 Ablation Study on CBAV-Loss -- 3.5 Influence of the Proposed Loss on Different Segmentation Networks -- 4 Conclusion -- References -- Leveraging Data Correlations for Skin Lesion Classification -- 1 Introduction -- 2 Related Work -- 2.1 Skin Lesion Classification -- 2.2 Correlation Mining -- 3 Methodology -- 3.1 Feature Enhancement Stage -- 3.2 Label Distribution Learning Stage -- 4 Experiments -- 4.1 Experiment Settings -- 4.2 Hyper Parameters Setting -- 4.3 Comparison with State-of-the-Art Methods -- 4.4 Ablation Studies -- 5 Conclusion -- References -- CheXNet: Combing Transformer and CNN for Thorax Disease Diagnosis from Chest X-ray Images -- 1 Introduction -- 2 Related Work -- 2.1 Label Dependency and Imbalance -- 2.2 Extensive Lesion Location -- 3 Approaches -- 3.1 Label Embedding and MSP Block -- 3.2 Inner Branch -- 3.3 C2T and T2C in IIM -- 4 Experiments -- 4.1 Dataset -- 4.2 Comparison to the State-of-the-Arts -- 4.3 Ablation Study -- 5 Conclusion -- References -- Cross Attention Multi Scale CNN-Transformer Hybrid Encoder Is General Medical Image Learner -- 1 Introduction -- 2 Methods -- 2.1 Dual Encoder -- 2.2 Shallow Fusion Module -- 2.3 Deep Fusion Module -- 2.4 Deep Supervision -- 3 Experiments and Results -- 3.1 Datasets -- 3.2 Implementation Details -- 3.3 Comparison with Other Methods -- 3.4 Ablation Studies -- 4 Conclusion -- References -- Weakly/Semi-supervised Left Ventricle Segmentation in 2D Echocardiography with Uncertain Region-Aware Contrastive Learning -- 1 Introduction -- 2 Methods -- 2.1 Multi-level Regularization of Semi-supervision -- 2.2 Uncertain Region-Aware Contrastive Learning -- 2.3 Differentiable Ejection Fraction Estimation of Weak Supervision -- 3 Datasets and Implementation Details -- 4 Results -- 5 Conclusion -- References. Spatial-Temporal Graph Convolutional Network for Insomnia Classification via Brain Functional Connectivity Imaging of rs-fMRI -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 3.1 Data

Preprocessing -- 3.2 Data Augmentation -- 3.3 Construction of Spatio-Temporal Graph -- 3.4 Spatio-Temporal Graph Convolution (ST-GC) -- 3.5 ST-GCN Building -- 3.6 Edge Importance Learning -- 4 Experiments -- 4.1 Dataset -- 4.2 Evaluation Metrics -- 4.3 Analysis of Different Sliding Window Step Size -- 4.4 Comparison with Other Methods -- 5 Conclusion -- References -- Probability-Based Nuclei Detection and Critical-Region Guided Instance Segmentation -- 1 Introduction -- 2 Related Works on Nucleus Instance Segmentation -- 2.1 Bounding Box-Based Methods -- 2.2 Boundary-Based Methods -- 2.3 Critical Region-Based Methods -- 3 CGIS Method and CPF Feature -- 3.1 Critical-Region Guided Instance Segmentation -- 3.2 Central Probability Field -- 3.3 Nuclear Classification -- 4 Experimental Verification and Analysis -- 4.1 Datasets and Evaluation Metrics -- 4.2 Parameters and Implementation Details -- 4.3 Comparisons with Other Methods -- 4.4 Ablation Study -- 5 Conclusion -- References -- FlashViT: A Flash Vision Transformer with Large-Scale Token Merging for Congenital Heart Disease Detection -- 1 Introduction -- 2 Method -- 2.1 Overview -- 2.2 FlashViT Block -- 2.3 Large-Scale Token Merging Module -- 2.4 Architecture Variants -- 3 Experiments -- 3.1 CHD Dataset -- 3.2 Evaluations on CHD Dataset -- 3.3 Homogenous Pre-training Strategy -- 3.4 Ablation Study -- 4 Conclusion -- References -- Semi-supervised Retinal Vessel Segmentation Through Point Consistency -- 1 Introduction -- 2 Method -- 2.1 Segmentation Module -- 2.2 Point Consistency Module -- 2.3 Semi-supervised Training Through Point Consistency -- 3 Experiments -- 3.1 Datasets -- 3.2 Implementation Details. -- 3.3 Experimental Results -- 4 Conclusion -- References -- Knowledge Distillation of Attention and Residual U-Net: Transfer from Deep to Shallow Models for Medical Image Classification -- 1 Introduction -- 2 Methods -- 2.1 Res-Transformer Teacher Model Based on U-Net Structure -- 2.2 ResU-Net Student Model Incorporates Residual -- 2.3 Knowledge Distillation -- 3 Data and Experiments -- 3.1 Datasets -- 3.2 Experimental Settings -- 3.3 Results -- 4 Conclusion -- References -- Two-Stage Deep Learning Segmentation for Tiny Brain Regions -- 1 Introduction -- 2 Method -- 2.1 Overall Workflow -- 2.2 Two-Stage Segmentation Network -- 2.3 Contrast Loss Function -- 2.4 Attention Modules -- 3 Experiments -- 3.1 Dataset and Metrics -- 3.2 Comparisons Experiments -- 4 Conclusion -- References -- Encoder Activation Diffusion and Decoder Transformer Fusion Network for Medical Image Segmentation -- 1 Introduction -- 2 Methodology -- 2.1 Lightweight Convolution Modulation -- 2.2 Encoder Activation Diffusion -- 2.3 Multi-scale Decoding Fusion with Transformer -- 3 Experiments -- 3.1 Datasets -- 3.2 Implementation Details -- 3.3 Evaluation Results -- 3.4 Ablation Study -- 4 Conclusion -- References -- Liver Segmentation via Learning Cross-Modality Content-Aware Representation -- 1 Introduce -- 2 Methodology -- 2.1 Overview -- 2.2 Image-to-Image Network -- 2.3 Peer-to-Peer Network -- 3 Experiments -- 3.1 Dataset -- 3.2 Setting -- 3.3 Result -- 4 Conclusion -- References -- Semi-supervised Medical Image Segmentation Based on Multi-scale Knowledge Discovery and Multi-task Ensemble -- 1 Introduction -- 2 Related Works on SSMS -- 3 Proposed Method -- 3.1 Multi-scale Knowledge Discovery -- 3.2 Multi-task Ensemble Strategy -- 4 Experiments and Analysis -- 4.1 Datasets and Implementation Details -- 4.2 Comparisons with State-of-the-Art Methods -- 4.3 Ablation Studies. -- 5 Conclusion -- References -- LATrans-Unet: Improving CNN-Transformer with Location Adaptive for Medical Image Segmentation -- 1 Introduction -- 2 Method -- 2.1 Encoder-Decoder Architecture --

2.2 Location-Adaptive Attention -- 2.3 SimAM-Skip Structure -- 3 Experiments -- 3.1 Dataset -- 3.2 Implementation Details -- 3.3 Evaluation Results -- 3.4 Ablation Study -- 3.5 Discussion -- 4 Conclusions -- References -- Adversarial Keyword Extraction and Semantic-Spatial Feature Aggregation for Clinical Report Guided Thyroid Nodule Segmentation -- 1 Introduction -- 2 Method -- 2.1 Adversarial Keyword Extraction (AKE) -- 2.2 Semantic-Spatial Features Aggregation (SSFA) -- 2.3 The Full Objective Functions -- 3 Experiment -- 3.1 Comparison with the State-of-the-Arts -- 3.2 Ablation Study -- 3.3 Visualization of Generated Keyword Masks -- 4 Conclusion -- References -- A Multi-modality Driven Promptable Transformer for Automated Parapneumonic Effusion Staging -- 1 Introduction -- 2 Related Works -- 2.1 Disease Detection Methods with CT Images -- 2.2 Classification Methods with Time Sequence Videos -- 3 Method -- 3.1 CNN-Based Slice-Level Feature Extraction -- 3.2 Prompt Encoder -- 3.3 Cross-Modality Fusion Transformer -- 4 Experiments -- 4.1 Setting and Implementation -- 4.2 Results -- 4.3 Ablation Study -- 5 Conclusion -- References -- Assessing the Social Skills of Children with Autism Spectrum Disorder via Language-Image Pre-training Models -- 1 Introduction -- 2 Related Works -- 2.1 Behavior Signal Processing System -- 2.2 Language-Image Pre-training Models -- 3 Methodology -- 3.1 Paradigm Design -- 3.2 Language-Image Based Method -- 4 Experimental Results -- 4.1 Database -- 4.2 Results -- 4.3 Discussion -- 5 Conclusion -- References -- PPS: Semi-supervised 3D Biomedical Image Segmentation via Pyramid Pseudo-Labeling Supervision -- 1 Introduction -- 2 Method.

2.1 Overview.

---

## Sommario/riassunto

The 13-volume set LNCS 14425-14437 constitutes the refereed proceedings of the 6th Chinese Conference on Pattern Recognition and Computer Vision, PRCV 2023, held in Xiamen, China, during October 13–15, 2023. The 532 full papers presented in these volumes were selected from 1420 submissions. The papers have been organized in the following topical sections: Action Recognition, Multi-Modal Information Processing, 3D Vision and Reconstruction, Character Recognition, Fundamental Theory of Computer Vision, Machine Learning, Vision Problems in Robotics, Autonomous Driving, Pattern Classification and Cluster Analysis, Performance Evaluation and Benchmarks, Remote Sensing Image Interpretation, Biometric Recognition, Face Recognition and Pose Recognition, Structural Pattern Recognition, Computational Photography, Sensing and Display Technology, Video Analysis and Understanding, Vision Applications and Systems, Document Analysis and Recognition, Feature Extraction and Feature Selection, Multimedia Analysis and Reasoning, Optimization and Learning methods, Neural Network and Deep Learning, Low-Level Vision and Image Processing, Object Detection, Tracking and Identification, Medical Image Processing and Analysis. .

---