

1. Record Nr.	UNINA9910768469403321
Autore	Liu Tongliang
Titolo	AI 2023: Advances in Artificial Intelligence [[electronic resource]] : 36th Australasian Joint Conference on Artificial Intelligence, AI 2023, Brisbane, QLD, Australia, November 28–December 1, 2023, Proceedings, Part I // edited by Tongliang Liu, Geoff Webb, Lin Yue, Dadong Wang
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9983-88-6
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (574 pages)
Collana	Lecture Notes in Artificial Intelligence, , 2945-9141 ; ; 14471
Altri autori (Persone)	WebbGeoff YueLin WangDadong
Disciplina	006.3
Soggetti	Artificial intelligence Computer networks Data mining Application software Computer vision Artificial Intelligence Computer Communication Networks Data Mining and Knowledge Discovery Computer and Information Systems Applications Computer Vision
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Organization -- Contents - Part I -- Contents - Part II -- Computer Vision -- Multi-graph Laplacian Feature Mapping Incorporating Tag Information for Image Annotation -- 1 Introduction -- 2 Related Work -- 3 Propoesd Method -- 3.1 Multi-graph Laplacian Incorporating Tag Information -- 3.2 Tag Graph Laplacian with Visual Content -- 3.3 Loss Function and Objective Function -- 4 Optimization -- 5 Experimental Results -- 5.1 Experiment Settings -- 5.2 Experimental Performance -- 5.3 The Analysis Parameters -- 6

Conclusion -- References -- Short-Term Solar Irradiance Forecasting from Future Sky Images Generation -- 1 Introduction -- 2 Related Works -- 3 Method -- 3.1 Nowcasting Model -- 3.2 Image Prediction Model -- 3.3 The Forecasting Framework -- 4 Experiments and Results -- 4.1 Datasets -- 4.2 Evaluate Metrics, Data Processing and Hyperparameters -- 4.3 Nowcasting Results -- 4.4 Forecasting Results -- 5 Conclusion -- References -- No Token Left Behind: Efficient Vision Transformer via Dynamic Token Idling -- 1 Introduction -- 2 Related Work -- 3 Methods -- 3.1 Preliminaries -- 3.2 Token Selection and Idling -- 3.3 Token Cut Loss -- 3.4 Finetuning -- 4 Experiments -- 4.1 Implementation Settings -- 4.2 Results -- 4.3 Analysis of Token Cut Loss -- 4.4 Analysis of Token Idle Strategy -- 5 Conclusion -- References -- Story Sifting Using Object Detection Techniques -- 1 Introduction -- 2 Background and Related Work -- 3 Approach -- 3.1 Recasting Story Sifting as Object Detection -- 3.2 Representing Story Arcs as Images -- 3.3 Choice of YOLOv5 Model -- 4 Model Development -- 5 Evaluating Model Performance -- 5.1 Model Performance -- 6 Evaluating Time Efficiency -- 7 Detection from a Virtual Storyworld Environment -- 8 Discussion -- 9 Conclusion -- References.

SimMining-3D: Altitude-Aware 3D Object Detection in Complex Mining Environments: A Novel Dataset and ROS-Based Automatic Annotation Pipeline -- 1 Introduction -- 2 Related Study -- 3 New Dataset: SimMining3D -- 3.1 Data Collection at Simulated Environment -- 3.2 Automatic Annotation -- 4 Perception: Baseline Experiment -- 4.1 Experimental Setup -- 4.2 Results and Discussion -- 5 Conclusion -- References -- Oyster Mushroom Growth Stage Identification: An Exploration of Computer Vision Technologies -- 1 Introduction -- 2 Related Works -- 3 The Monitoring System -- 3.1 The Problem -- 3.2 The Label Map -- 4 Empirical Studies -- 4.1 Settings -- 4.2 Performances -- 5 Conclusion and Future Works -- References -- Handling Heavy Occlusion in Dense Crowd Tracking by Focusing on the Heads -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 3.1 Framework Overview -- 3.2 Anchor-Free Head-Body Detection -- 3.3 Joint SimOTA -- 3.4 Tracking Framework -- 3.5 Loss Function -- 3.6 Training Details -- 4 Experiments -- 4.1 MOT Challenge -- 4.2 Qualitative Result on MOT20 -- 4.3 Ablation Study on Joint SimOTA -- 4.4 Crowdhuman -- 5 Conclusion -- References -- SAR2EO: A High-Resolution Image Translation Framework with Denoising Enhancement -- 1 Introduction -- 2 Related Work -- 2.1 GAN -- 2.2 Image-to-Image Translation -- 3 Proposed Method -- 3.1 Preliminary: Pix2pixHD -- 3.2 SAR and EO Images -- 3.3 Denoising Enhanced SAR2EO Framework -- 4 Experiments -- 4.1 Dataset -- 4.2 Metrics -- 4.3 Implementation Details -- 4.4 Main Results -- 4.5 Ablation Studies -- 5 Conclusion -- References -- A New Perspective of Weakly Supervised 3D Instance Segmentation via Bounding Boxes -- 1 Introduction -- 2 Related Work -- 2.1 Fully Supervised Method -- 2.2 Weakly Supervised Method -- 3 Methodology -- 3.1 Problem Description -- 3.2 Cluster-Based Candidate Points Filtering. -- 3.3 Smallest-Box Heuristic -- 4 Experiment -- 4.1 Implementation Details -- 4.2 Dataset -- 4.3 Evaluation Metrics and Experiment Results -- 4.4 Ablation Study -- 4.5 Robustness -- 5 Conclusion -- References -- Large-Kernel Attention Network with Distance Regression and Topological Self-correction for Airway Segmentation -- 1 Introduction -- 2 Method -- 2.1 Network Architecture -- 2.2 Prediction Head -- 2.3 Implementation Details -- 3 Experimental Results -- 3.1 Metrics -- 3.2 Comparison with Other Methods -- 3.3 Ablation Study -- 4 Conclusion -- References -- Deep Learning -- WeightRelay: Efficient

Heterogeneous Federated Learning on Time Series -- 1 Introduction -- 2 Related Work -- 2.1 Deep Learning for Time Series Classification -- 2.2 Federated Learning on Heterogeneous Devices -- 3 Motivation -- 4 Weight Relay -- 4.1 Heterogeneous Models -- 4.2 Weight Alignment -- 5 Analysis of Weight Relay -- 5.1 Consistency Proof for the Alignment -- 5.2 Macro Explanation of the Training Acceleration -- 5.3 Micro Explanation of the Training Acceleration -- 6 Experiment -- 6.1 Benchmarks -- 6.2 Evaluation Criteria -- 6.3 Experiment Setup -- 6.4 Experiment Result -- 7 Conclusion -- References -- Superpixel Attack -- 1 Introduction -- 2 Preliminaries -- 2.1 Problem Definition -- 2.2 Related Work -- 3 Research on Update Areas -- 3.1 Update Areas of Existing Methods -- 3.2 Color Variance of Update Areas -- 3.3 Compactness of Update Areas -- 3.4 Superpixel Calculated by SLIC -- 3.5 Analysis of Color Variance and Compactness -- 4 Superpixel Attack -- 4.1 Update Areas Using Superpixels -- 4.2 Procedure of Versatile Search -- 5 Experiments -- 6 Conclusion -- References -- Cross Domain Pulmonary Nodule Detection Without Source Data -- 1 Introduction -- 2 Method -- 2.1 Feature Extractor Adaptation -- 2.2 Detection Head Adaptation -- 3 Experiments. 3.1 Benchmark and Evaluation -- 3.2 Implementation Details -- 3.3 Results -- 4 Related Works -- 5 Conclusion -- References -- 3RE-Net: Joint Loss-REcovery and Super-REsolution Neural Network for REal-Time Video -- 1 Introduction -- 2 Related Work -- 3 Model Design -- 4 Experiments -- 5 Conclusion -- References -- Neural Networks in Forecasting Financial Volatility -- 1 Introduction -- 2 Related Work -- 3 Experimental Comparison of Forecasting Models -- 3.1 Posing the Problem as a Shared Task -- 3.2 Methods -- 3.3 Result Evaluation and Analysis -- 4 Discussion -- References -- CLIP-Based Composed Image Retrieval with Comprehensive Fusion and Data Augmentation -- 1 Introduction -- 2 Related Work -- 2.1 Composed Image Retrieval -- 2.2 Vision-Language Pre-training -- 3 Methodology -- 3.1 Problem Formulation -- 3.2 CLIP-CD -- 4 Experiments -- 4.1 Datasets and Metrics -- 4.2 Implementation Details -- 4.3 Performance Comparison -- 4.4 Ablation Study -- 4.5 Case Study -- 5 Conclusions -- References -- LiDAR Inpainting of UAV Based 3D Point Cloud Using Supervised Learning -- 1 Introduction -- 2 Related Work -- 3 Preliminaries -- 4 Problem Definition -- 5 Methodology -- 5.1 Simulator -- 5.2 Extracting Individual Point Clouds -- 5.3 Point Cloud Inpainting Model -- 5.4 Inpainting Complete Environments -- 6 Experimental Results -- 7 Conclusion and Future Work -- References -- A Sampling Method for Performance Predictor Based on Contrastive Learning -- 1 Introduction -- 2 Background -- 2.1 Contrastive Learning -- 2.2 Graph Data Sampling Methods -- 3 Approach -- 3.1 Architecture Augmentation -- 3.2 Architecture Maximal Agreement -- 4 Experiments -- 4.1 Overall Performance -- 4.2 Performance Evaluation in NAS Datasets -- 4.3 Ablation Study -- 5 Conclusion -- References. AdaptMatch: Adaptive Consistency Regularization for Semi-supervised Learning with Top-k Pseudo-labeling and Contrastive Learning -- 1 Introduction -- 2 Related Work -- 2.1 Consistency Regularization -- 2.2 Contrastive Learning -- 3 Our Approach: AdaptMatch -- 3.1 Data Augmentation -- 3.2 Top-k Label Guessing -- 3.3 Contrastive Learning -- 3.4 Summarization of the Framework -- 4 Experiments -- 4.1 Datasets and Experimental Setup -- 4.2 Main Results -- 5 Ablation Study -- 6 Conclusion -- References -- Estimation of Unmasked Face Images Based on Voice and 3DMM -- 1 Introduction -- 2 Related Research -- 2.1 Studies on Mask Removal -- 2.2 Studies on Estimating Facial Shape from Voice -- 2.3 3D Morphable Model (3DMM) -- 3

Proposed Method -- 3.1 Overview of the Proposal Method -- 3.2 Extraction of Voice Embedding -- 3.3 Combining Voice Embedding and Intermediate Features -- 3.4 Training of Multitasking Module -- 4 Experiments and Results -- 4.1 Dataset -- 4.2 Training Details -- 4.3 Qualitative Evaluation -- 4.4 Quantitative Evaluation -- 5 Discussion -- 5.1 On Qualitative Evaluation -- 5.2 On Quantitative Evaluation -- 6 Conclusion and Future Works -- References -- Aging Contrast: A Contrastive Learning Framework for Fish Re-identification Across Seasons and Years -- 1 Introduction -- 2 Related Work -- 2.1 Deep Learning for Fish Recognition -- 2.2 Contrastive Learning -- 3 Dataset -- 4 Proposed Method -- 4.1 Segmentation and Feature Extraction -- 4.2 Aging Contrast Framework -- 5 Experiments -- 6 Conclusion -- References -- Spatial Bottleneck Transformer for Cellular Traffic Prediction in the Urban City -- 1 Introduction -- 2 Related Work -- 3 Problem Formulation -- 4 Methodology -- 4.1 Spatial Bottleneck Transformer -- 4.2 ST-InducedTran Model -- 5 Experiments -- 5.1 Dataset -- 5.2 Baseline -- 5.3 Implementation Details -- 5.4 Evaluation Metrics.

6 Results and Discussion.

Sommario/riassunto

This two-volume set LNAI 14471-14472 constitutes the refereed proceedings of the 36th Australasian Joint Conference on Artificial Intelligence, AI 2023, held in Brisbane, QLD, Australia during November 28 – December 1, 2023. The 23 full papers presented together with 59 short papers were carefully reviewed and selected from 213 submissions. They are organized in the following topics: computer vision; deep learning; machine learning and data mining; optimization; medical AI; knowledge representation and NLP; explainable AI; reinforcement learning; and genetic algorithm. .
