2024 5th International Conference on Big Data & Artificial Intelligence & Software Engineering (ICBASE) | 979-8-3315-0661-2/24/$31.00 ©2024 IEEE | DOI: 10.1109/ICBASE63199.2024.10762228

Table of Contents

Dynamic Monitoring of Google Play Store Ranking Changes: Data Mining of Important Features 1
Simeng Li, Hao Fan, Yifan Wang

Enhancing the Precision Management of University Student Dormitories Based on Big Data 11
Xuefeng Xiang

Generating Initial Units in Games Using Evolutionary Algorithms and Dominance Relationship Matrix 15
Minchen Yang, Ziyi Yang

Multi-modal Remote Sensing Visual Question Answering Algorithm Based on Large Language Model 20
Shengbang Qiu

Cross-domain Action Decision Algorithm for Unmanned Vehicles Based on Reinforcement Learning 24
Kaiyao Shen, Yiming Nie, Erke Shang, Bin Dai

Analysis of the Impact of Internet Public Opinion on the Securities Market Based on Big Data 30
Yuanyuan Zhang, Yangyang Li

A data fusion method based on an optimized neural network for MEMS accelerometer arrays 34
Xinxin Zhang, Qilong Wu, Han Sun

Enhancing Convolutional Neural Networks with Higher-Order Numerical Difference Methods 38
Qi Wang, Zijun Gao, Mingxiu Sui, Taiyuan Mei, Xiaohan Cheng, Iris Li

Solving Time-Dependent Vehicle Routing Problem with Modulo Operation Genetic Algorithm Integrated with ALNS 43
Yuedong Jia, Huanzhe Li

Application and fusion analysis of advanced mathematical modeling thought based on computer technology in university teaching 49
Yangchun Hu, Shaojun Shi

Fine-grained Sentiment-Topic Analysis of Social Network Text Based on ERNIE and BiLSTM 53
Yining Cheng, Jing Zheng

Sports Injury Prediction and Prevention: Analysis Methods Based on Big Data and Artificial Intelligence 60
Xuejun Guo, Pengchao Liu, Ting Li

Lightweight fire detection algorithm based on LSCD-FasterC2f-YOLOv8 64
Bo Yin

M2FU: Multi-Modal Fusion for Urban Autonomous Driving 68
Daiqi You, Gang Feng

Enhancing Sentiment Classification of Chinese Text with A Dynamic Weighted Voting Network 73
Xuyi Lin, Qiutong Shao, Lei Kaung, Hao Yang

ESM-LSTM based optimisation model for weather prediction 79
Guilan Luo, Long Wang, Yongwang Zeng, Zijie Chen, Shuzhen Wen, Mei Zhang

Mining social media data based on Python web crawler technology --Taking Sina Weibo data analysis as an example 84
Shuntai Chi, Xisong Miao, Lianzhi Duan, Yuze Zhang

Research on Love Psychology Health Prediction based on XGBoost and Big Data 90
Yuqi Sun, Jie Zhou

Implicit aspect-based generative model for sentiment analysis based on prompt learning 94
Xinlong Wang, Xu Li, Yinghui Yin, Yang Li

Research on Online Review Text Sentiment Analysis Using RoBERTa and BiLSTM Hybrid Method Based on Attention Mechanism 98
Qin Gao, James A. Esquivel

Deadline-aware Load Allocation for Coded Computation over Heterogeneous Clusters 102
Shiying Cheng, Yuxuan Lin, Bin Tang

An improved variable step size LMS adaptive filtering algorithm based on hyperbolic sine function and its application 106
Zhengang Wan, Yonghao Zhou

Enhancing Geometry Problem Solving with Attention Mechanism and Super-Resolution 112
Chao Zhang, Jing Xiao, Xiaoyang Fu

Human Pose Estimation Algorithm Based on Improved Lightweight High-Resolution Network 116
Haoyu Du

Research on apple recognition and counting model based on image processing 120
Jinda Dong, Fei Xue, Tingting Dong, Hengliang Tang

A Review of Key Technologies for Time-Series Data Storage in Embedded Environments 125
Zelan Yuan, Dewang Ren, Yao Zhao, Yuyan Wang

Research on Influencing Factors of Mobile eSports Player Behavior Based on Big Data Mining 129
Lingfang Cao

Causal Reasoning of Stored Grain Pest Events Enhanced by Large Language Models 135
Le Xiao, Jing Zhao, Yunfei Xu

Comprehensive monitoring of converter valve reactor status based on multi-source data fusion 142
Zhen Wang, Linhao Xu

A Remote Sensing Road Extraction Model Based on Improved Deeplabv3+ with Adaptive Multi-Scale Feature Fusion Pyramid 146
Yansheng Ke, Jing Wang

Dynamic Offloading of Complex Tasks Based on Generative Adversarial Q-Networks in Edge Computing 152
Lijuan Zhang, Zhuo Chen, Yan Li

Density Peaks Clustering Algorithm Based on Weighted Shared Nearest Neighbors 157
Jinyi Suo, Aosheng Xing, Tonglei Sun

Airborne reconfigurable data processing and analysis technology based on air-ground bidirectional link 161
Hao Wang, Youyang Qu, Shenghu Liu, Guowang Zhang

Enhancing Mathematical Problem Solving in Large Language Models through Tool-Integrated Reasoning and Python Code Execution 165
Siyue Li

UeFormer: A Unifying Encoding Transformer Neural Operator for meteorological downscaling 169
Yichi Wang, Yifan Jian, Xinrui Chen, Haodi Zhang

An aspect sentiment of online review- based multi-criteria framework for technical attribute sustainable evaluation and purchase decision of sweeping robot 174
Zeqing Yu

A Probabilistic Multi-Model Framework for Efficient Search and Rescue of Lost Autonomous Underwater Vehicles 180
Ying Cao, Shuoning Zhang, Zijian Kang, Shixin Fang

A Key Node Identification Algorithm in Social Networks Based on Global Betweenness Entropy 185
Guilan Luo, Shuzhen Wen, Caikui Wang, Long Wang, Yongwang Zeng, Zijie Chen

User Identification Algorithm in E-Commerce Based on Support Vector Machines and Clustering Detection 190
Jia Li, Jiajun Zou, Shaojiang Liu, Zhiping Wan, Weichuan Ni

Leveraging Ensemble Deep Learning Model for Fruit Image Recognition with Explainable AI 195
Yaoqing Wang, Chang Yu, Xiyue Lin, Goodness Temofe Mgbejime, Grace U. Nneji, Happy N. Monday

Ensemble Learning Approach for Car and Tank Image Identification with Explainable AI 200
Xinglin Li, Yong Wang, Jiexuan Shen, Shi Li, Happy Nkanta Monday, Grace Ugochi Nneji

Research on EEG Emotion Recognition Based on Multi-scale Residual Convolutional Neural Network 204
Xiaoqin Lian, Ziqi Shi, Chao Gao, Guochun Ma, Yelan Wu, Wenyang Guan

AdaBoost-SVM Face Recognition Algorithm Based on LBP and Gabor Feature Fusion 208
Xiaoqin Lian, Chunquan Liu, Chao Gao, Guochun Ma, Yonggang Gong, Jin Li

PCR-YOLO: An Improved YOLOv8 Paleographic Character Recognition Model Applying the Efficient Local Attention (ELA) Mechanism 212
Yutian Zhuang

Multi-relational network layer node immunization strategy based on multi-particle random walk 217
Yong Huang

An Improved UAV Image Small Target Detection Method Based On YOLOv8 221
Qinghua Li, Ze Liu, Rui Yang

Chinese Speech Emotion Recognition Based on Pre-Trained Model 227
Sukui Xu, Nan Jiang, Shun Lian, Jingmin Pan

Improvements and experiments on defect detection of optical images of underwater structures 232
Hongwei Du, Xianglong Zhang, Kai Wang, Guanghua Li, Bingju Lu

Wi-SensiNet: Through-Wall Human Activity Recognition Based on WiFi Sensing 238
Xiaoyi Fu, Chenlu Wang, Shenglin Li

A Semantic Segmentation Algorithm of Cracks in Tunnels Based on Dual-branch and Attention Fusion 242
Jiaxin Ren, Huayu Jia, Biao Luo

A Natural Language Processing-like Method for Streamline Similarity Analysis 247
Zhilin Huang, Zhibin Huang, Min Yu

Research on small target recognition technology based on YOLOv8 252
Zhaojie Xu, Li Liu, Zemin Chen, Xiaodong Jin

A Deep Learning-based High Precision Segmentation Method for Endometrial Cancer using MRI Images 257
Delong Liu, Chunxia Chen, Yongping Lin

Sentence Similarity Model based on Semantics and Syntax 261
Ya Zhou, Chen Chen, Guimin Huang

Modulation Recognition of Underwater Acoustic Communication Signals Based on Frequency-Domain Recurrence Plot and CBAM-ResNet 265
Heng Yang, Biao Wang

Using Text-augmented Visual Prompt Learning for Histopathology Image Classification 272
Lan Yang, Wenlong Qu

Efficient Entity Resolution via Hierarchical Graph Attention and Semantic Blocking 277
Yaoli Xu, Chenglin Li, Zhilei Yin, Haibin Lu, Tong Han, Zheran Yang

Psychology-Informed Network Alignment 282
Yang Xu, Rui Cai, Huabin Wang, Yiwen Zhang, Hong Zhong, Dengcheng Yan

NSE-KGC: A knowledge graph completion method based on neighborhood semantic evidence 287
Yana Lv, Haomiao Bao

Face Image Super-resolution based on GAN Constrained by Residual Dense Network and Channel Attention Mechanism 291
Shengnan Xu, Menchita F. Dumlao

G-UNet: A Breast Cancer Lesion Segmentation Method Based on Cross-attention 295
Jianxin Yang, Xianzhi Mai, Junyu Lin, Peiying Luo, Zhijun Zheng

Remote sensing image building segmentation integrating detail and global information 300
Zilong Sun, Xiaopeng Wang

GAN-Based Unsupervised Day to Night Image Translation for Nighttime Vehicle Detection 306
Yang Xu, Liantao Wang

Road Pavement Crack Detection Algorithm Based on Vehicle Panoramic Image 311
Rufei Liu, Ruixin Lai, Hongwei Ren, Yi Zhang, Zeyu Li, Zhanwen Su

Conference summary generation method based on LDA and Transformer 319
Shumeng Hao, Hui Li, Dongbin He, Yanhong Zhu

Identification of Prognostic Biomarkers for Stage III Non-Small Cell Lung Carcinoma in Female Nonsmokers Using Machine Learning 323
Huili Zheng, Qimin Zhang, Yiru Gong, Zheyan Liu, Shaohan Chen

Research on the identification method of ZPW-2000 frequency shifted signal based on Auxiliary Classifier Generative Adversarial Network 327
Wenjuan Liu, Xiaochun Wu

Underwater metal identification method based on PSO-BP neural network 332
Xueliang Pang, Minghang Zhang, Nianci Yang

Named Entity Recognition Based on Large Language Model and Instruction Tuning 336
Sheng Yang, Min Li, Luo Xu

Application of Image Recognition Technology in Education and Office Automation 344
Enxi Liu

A Feature Fusion-Based Lightweight Algorithm for Small Object Detection in UAV Aerial Imagery 348
Guang Wang, Yanming Zhang, Qiang Ai

Wheat Leaf Disease Identification Based on a Fusion Model Integrating Attention Mechanisms and Channel-Spatial Reconstruction Convolution 352
Haifan Xie, Rongxin Zou, Zicong Yang, Aitong Jin, Junxi Wang, Yu Li

A robust double-layer affinity based matting method 357
Guilin Yao, Junjie Chang

A gesture recognition algorithm based on deep learning 361
Renjie Tang, Lei Zhang, Xiaoli Hu

Construction method of Geographic Knowledge Graph based on Micro-Annotation 367
Xingshu Wang, Ying Nie

The Detection of Engineering Vehicle on Remote Sensing Image Using Improved YOLOv5 372
Jinwang Chen, Shaoxin Chen, Mingxing Shi, Shu Lin, Mengying Huang, Xinyu Liu

Research on Dual-Channel News Classification Method Combined with TextCNN and BiGRU 378
Siyu Zeng, Jianzhao Cao, Xiangxiang Shi

A high-load DNN watermarking scheme based on optimal embedding position 382
Mingyang Zheng, Junling Ren

CA-BERT: Leveraging Context Awareness for Enhanced Multi-Turn Chat Interaction 388
Minghao Liu, Mingxiu Sui, Yi Nian, Cangqing Wang, Zhijie Zhou

Improved Unet model for brain tumor image segmentation based on ASPP-coordinate attention mechanism 393
Zixuan Wang, Yanlin Chen, Feiyang Wang, Qiaozhi Bao

Research and Design of Process Automation Robots Based on BiLSTM-CRF 398
Zheng Liu, Dandan Song, Zhiqiang Sheng, Xueying Song, Yining Wei, Peipei Tian, Jianan Zhou

Dynamic Graph Convolution Network for Multi-Label Class Incremental Learning 402
Yu Wang, Anhui Tan, Shenming Gu

C-AW: A Clustering-based Adaptive Weighting Selection-Aggregation Framework for Federated Learning 406
Guan Wang, Shihao Liu, Runyang Liu

ALFL: A Federated Learning Client Selection Algorithm for Heterogeneous Data 410
Guan Wang, Runyang Liu, Shihao Liu

Design of Deep Learning-based PPG Blood Pressure Prediction Model 414
Meijiao Wang, Xiaoqiang Ji

Global and Local Graph Convolution Network for Multi-Label Class Incremental Learning 419
Jianhang Xu, Anhui Tan, Shenming Gu

Construction of Graduate Student Quality Assurance System Based on Clustering Algorithm Analysis of research hotspots and evolutionary trends 423
Ludan Zhang, Xinmeng Sheng, Ziwei Zhao, Shikui Cao

An Innovative Study on the Design of Silankappu Cultural Creation under the Threshold of Service Design 431
Zhengcong Wei, Yashi Huang, Bowen Sun

A Simple but Powerful Baseline for Continual Learning 438
Juan Du, Shengzhi Wang

Design and Implementation of IoT Perception Layer Network Testing Platform 442
Xiqing Min, Wei Ben, Wenchao Zheng, Shanshan Cao

Research on Efficient Traffic Light Detection System in Intelligent Connected Vehicles 446
Ke Zheng, Chuanyin Tian, Qingxia Li, Chunsheng Zhao

Coordinated Optimization and Configuration Optimization of Wind, Photovoltaics and Energy Storage based on Particle Swarm Optimization Algorithm 450
Shatong Zhu, Yifan Zhang

Attribute Disturbance for Attributed Multiplex Heterogeneous Network Embedding 455
Huimin Su, Qian Li, Yongshun Gong, Yulong Liu, Xinyu Jiang

TSM-LLM: Task Scheduling Management System for Large Language Models 463
Ziqiang Wen, Guoping Zhu, Yong Wang, Haijun Luo, Nianchao Liu

A Novel LSTM-KAN Networks for Demand Forecasting in Manufacturing 468
Qingpeng Gong, Yuanfei Xue, Rui Liu, Zhongkui Du, Shengjie Li, Jiaming Wang, Guodong Sun

A Wasserstein Metric Based Distributionally Robust Synthesis Sparse Coding for NILM 474
Jie Li, Yunle Tang, Linfeng Yang, Shifei Chen

Intriguing Properties of Universal Adversarial Triggers for Text Classification 480
Kexin Zhao, Runqi Sui, Xuedong Wu, Wenchuan Yang

A Flexible Architecture of Satellite Mission Operation System Based on Cloud Computing 488
Yanjun Cao, Liang Shuo, Zhanhua Chen, Jinyong Chen

Monte Carlo Tree Search-Based Agent Negotiation Framework for Shared Decision-Making 492
Xin Chen, Yong Liu, Ping Lu, Kaibiao Lin

The compatibility of psychological research and machine learning analysis based on theoretical frameworks 499
Jie Zhou, Shaojun Shi

Research on the Application of Local Differential Privacy: A Survey 503
Ying Cao, Hua Shen

Prediction Modeling of Propagation Delay in eLoran System Based on Meteorological Factors 507
Hui Liao

Design based on industrial material inspection and defect analysis system 512
Sijie Zhang

Multi-Scale Contextual Transformer for MRI Super-Resolution 517
Ziyang He, Ziyi Wang

Design and implementation of campus Single sign-on system based on CAS 521
Xiaoshu Li

Style Transfer: From Stitching to Neural Networks 526
Xinhe Xu, Zhuoer Wang, Yihan Zhang, Yizhou Liu, Zhaoyue Wang, Zhihao Xu, Muhan Zhao, Huaiying Luo

Graph Neural Network Framework for Sentiment Analysis Using Syntactic Feature 531
Linxiao Wu, Yuanshuai Luo, Binrong Zhu, Guiran Liu, Rui Wang, Qian Yu

Back Track system based on quadratic programming and fuzzy algorithm 536
Chao Li, Bin Liu, Hengkai Wang, Lishuang Fang

Research on the Quantitative Control Problem and Fault Tolerant Control Method of a Class of Networked Control Systems with Quantitative Delay at the Sensor Controller End 542
Qingyang Jiang, Juan Song

Reduction for Timed Discrete-Event Systems I: Timed Discrete-Event Systems are Synchronous Product Structures 548
Liyong Lin, Jian Cao, Lele Li

Research on Standard Driven Aerospace Software Quality Improvement Technology Based on Quality Chain 553
Shuang Zhao, Shengfen Niu, Jianchao Chen, Dandan Wang, Shoubin Li

OGIG: A Botnet Detection Model Integrating Graph Structural Modeling and Time Series Analysis 561
Wei Wang, Ying Yang, Yangzhi Hou, Zhaoyong Yu, Wenhao Ma

Generative Model-Based Test Case Generation and Operational Testing for Deep Learning 565
Shenglin Bao, Nan Jiang, Weijie Zhu, Pei Zhang

Characterizing Regression in Deep Learning Model Evolution 571
Shenglin Bao, Xuguang Zhu, Pei Zhang

DDoS Attack Detection and Classification Based on Hybrid Deep Learning Model in SDN 579
Lisha Jin, Jianhua Zhang, Zhongrui Li, Yanlin Liao

Real-Time Worker Behavior Recognition in Power Construction Using Selective State Space Model 584
Zhuyi Rao, Chonghang Li, Peng Gao, Wenzheng Song, Ying Li

The Novel End-to-End Style Generation Model for Architectural Style Transfer and Classification 589
Lifeng He, Jingsong Wang, Zihao Zhang

Deep learning based fault diagnosis method for S700K switch machines 595
Yan Zhang, Zhenhai Zhang

A Query-less adversarial attack method against time series forecasting 599
Liang Zhao, Haining Cai, Guoqing Fan, Yulong Hu

Aircraft Surface Defect Detection Based on Improved YOLOv8 603
Qi Ren, Dan Wang

PointMSCA: A point cloud analysis model based on attention feature fusion mechanism 607
Huanran Lin, Dongfeng Liu

YOLO-AES A Lightweight Model for Real-Time Underwater Object Detection 611
Yuan Zhang, Xiaoxian Zhang

Technical Research on Deep Learning Generative Adversarial Networks for Fake News Sample Augmentation and Detection 616
Lian Lian

Dual Feature Extraction and Fusion for Malicious Traffic Detection based Transformer Encoders 620
Guizhong Xu, Yujuan Huang, Xinbo Han

A dual bidding model for performance advertising based on deep learning 625
Ruiyang Wang, Da Liu

LLMSQLi: A Black-Box Web SQLi Detection Tool Based on Large Language Model 629
Tinghui Yang, Zhiyuan Jiang, Yongjun Wang

Deep Learning-Based Channel Squeeze U-Structure for Lung Nodule Detection and Segmentation 634
Mingxiu Sui, Jiacheng Hu, Tong Zhou, Zibo Liu, Likang Wen, Junliang Du

A Method for Measuring the Spatial Position and Volume of Non-Rigid Moving Targets Based on Multi-View Intersection Measurement 639
Chengxiang Tian, Minghao Geng, Lei Zhou, Yihong Ding

Research on rail surface defect detection algorithm based on improved yolov8 644
Tong Bu, Tao He

Research on Penetration Attack Detection Based on CNN-BiGRU-Attention 648
Junyu Jia, Junling Ren

SSE-YOLO: A Lightweight Model for Efficient Fire Detection in Real-Time Applications 655
Zhike Qiu, Yuhao Qin

Research on Anomaly Detection Method for Meteorological Data Based on LSTM-TCN Neural Network 661
Yuejiao Zhang, Fei Cui, Zhuxin Xue, Guochao Fan

Context-Aware Grammatical Error Correction Model 668
Jianxing Lin, Guimin Huang, Jiahao Wang

A Traffic Sign Detection Model Based on Improved YOLOv8 672
Zilong Chen, Li Liu, Zemin Chen, Xiaodong Jin

Safety Helmet Detection Using Improved YOLOv8 677
Zhao Chen, Baoping Liu, Xiang Gao, Shaodong Sun, Bin Yao

Driver fatigue detection based on multi-feature fusion facial features 683
Run Yuan, Haonan Long

UAV-based infrard thermography for the fine high-voltage insulators detection 687
Lihong Xu, Xinyu Liu

A Hybrid Model for Network Anomalies Classification Based on Improved Random Forest and Frequent Itemset Matching 693
Ruiyang Zeng, Bing Jiang

Psychology-informed Rumor and Stance Detection 701
Jingru Wei, Yanping Cai, Dengcheng Yan, Huabin Wang, Hong Zhong, Qingren Wang

Local Community Detection from Noisy Graph Streams 707
Han Yang, Lingxiang Wang, Qingren Wang, Huabin Wang, Yiwen Zhang, Hong Zhong, Dengcheng Yan

Smoking Detection in Substation Field Operation Based on Improved Faster R-CNN 713
Zhanshe Yang, Yao Han, Cheng Zhang, Sen Tang

Axial Attention Transformer Networks: A New Frontier in Breast Cancer Detection 717
Weijie He, Runyuan Bao, Yiru Cang, Jianjun Wei, Yang Zhang, Jiacheng Hu

IFDet: Interactive and Flexible Single-Stage Detector 722
Senmiao He, Xiaowei He

Forensic Synthetic Speech Inspection Technique based on Non-formant speech features 728
Qimeng Lu, Puyang Geng, Hong Guo

Research on improved yolov5 quay crane defect detection algorithm 732
Tianhao Yang, Jun Liu

Event-based human behavior detection 736
Huiyu Wang, Ming Li, Qin Lu

An enhanced time series anomaly detection model based on frequency domain analysis 740
Jiajia Wang, Ying Jiang

VGG16-AttnNet: a banana leaf lesion recognition model combining VGG16 and self-attention mechanism 745
Yintang Huang, Han Chen, Junshen Hong, Zhihong Zhao, Zhenbang Kuang, Youyu Zhou

Abnormal User Behavior Detection in Energy Big Data Platform Based on Digital Portrait 749
Hongkun Bai, Qiuyan Li, Yibo Jia, Feifei Bu, Junli Guo

Research on credit scoring model optimization based on machine learning 756
Keyi Chen

Automatic Fruit Detection Based on Robotic Vision 761
Yiran Chen, Rui Yao, Haoran Liu, Bingqi Liu, Mingzhe Liu

Predicting Future Incidences of Crime Based on the CNN-Transformer Model 766
Binbin Huang

Analysis and Identification of Ancient Glass Composition Based on the RF K-means++ Method 770
Qixuan Sun, Xin Chen

Research on fatigue life prediction model of lightweight foam soil for low carbon embankment based on machine learning 775
Xingyu Zhang, Weiwei Meng, Jia He

Research on the Dynamic Hedging Trading Strategy for Portfolios Based on Deep Reinforcement Learning 780
Fangji Song, Chunyu Liu, Jiapeng Liu

Research on Network Situational Awareness Prediction Techniques Combined with FA-ELM 785
Shuai Zhu, Yichao Wang, Chuanting Chen, Yali Guo

Electricity demand forecasting based on hybrid BiGRU-BiLSTM model prediction framework with dual time domain decomposition 789
Yu Wu, Guocu Gong, Chenyang Zhu

Application Research on Corn Fertilization Optimization Using Random Forest Coupled with Cuckoo Search 794
Yang Shen, Yalin Sun, Yingnan Hou, Quan Zhou, Zegen Zhang, Junyu Chen

Wireless sensor health state analysis under perturbation 799
Shukun Jin, Xingyu Mu

A Novel Dynamic Fluid Level Prediction Method in Oil Wells based on Acoustic Signals and Time-frequency Domain Analysis 806
Li Ma, Haiyong Zhao, Xingfu Gou, Jianzhong Li, Zhonghui Jin, Bin Zhou

Optimization of BP neural network based on genetic algorithm for body fat density regression prediction 811
Yibin Li, Bangya Hu

A Long Time Series Prediction Model Based on CNN and Linear Combination 816
Wuye Lv, Xiaoxia Huang

A study of momentum prediction based on particle swarm optimisation and random forests 821
Jiayue Liu, Jiahao Cheng, Wenjie Li

Research on a Prediction Method for Atrial Fibrillation Based on LDA Machine Learning 830
Boxu Yang

Time Series Prediction Model Based on Deep Learning for Traffic Flow 834
Yuhan Feng

Establishment of a Hybrid Model for Bridge Structure Risk Prediction Based on Long Short-Term Memory Model 838
Renwei Liu

Enhancing Sensor Accuracy: Integration of Kalman Filtering and Machine Learning 844
Cunyu Cheng

Enhancing Heart Rate Prediction with Mamba and Simple-Attention Modules for Early Warning in Exercise 848
Hong Zhang, Qingheng Zhan, Zihao Wang, Junwei Zhang

Optuna-XGBoost porosity prediction for logging profiles of carbonate formations 853
Tao Xie, Zhiyuan Meng, Suxia Xing, Chongchong Yu, Yingxin Wang, Xiaoqing Liu, Kaitai Xiao

Multimodal Representation Learning by Hybrid Transformer with Multi-level Fusion 860
Yi Wu, Hongquan Xu, Jiaqing Zhang

Urban Drainage Network Overflow Risk Prediction Based on Fuzzy Brain Emotional Learning 866
Xiaojin Chen, Yuan Sun, Zhiwang Yang, Qinan Wang, Shaobo Kang, Jiansheng Guan

Birth Rate Prediction in China Based on Combination Algorithm of Factor Analysis and Neural Network 875
Jingui Wu

A Fact Prediction Model based on Hyper Graph and Neural Network 880
Hongji Sun, Muchi Wei, Jiazhe Li, Xilei Xu, Borui Zhou

Creating light probes for global illumination rendering of 3D scenes via two-stage search 884
Huiwen Chen, Chunyi Chen

An improved hybrid graph method for drug side-effects prediction 888
Xiang Li, Xiangmin Ji

A New Model Based on Graph Neural Network Feedback for Crystal Property Prediction 892
Jian Zhu, Yongshen Ren, Huaijuan Zang, Shu Zhan

Research on Multi-robot Path Planning Based on Optimal Energy Consumption 896
Yang Wang, Jinchuan Kang, Yuqi Liu, Qi Tang

Research on Improved Transformer Based-Flood Risk Prediction Model for Substations 901
Xuanhua Ke, Ying Shi, Degui Yao, Yun Liang, Jinyu Wang

Lung Nodule Diagnosis Using New Astrocyte- Illumined Neural Networks with Transfer Learning 906
Yang Chao, Mengqiao Han

Combining dynamic split convolutions and lightweight inverse residual module for human pose estimation 911
Li Wang, Rihan Gu

LRG-UNet: A lightweight randomized grouped feature aggregation enhanced UNet for rectal cancer gland segmentation 915
Chuqi Chen, Shengtao Zhang, Jia Zhao

An Improved Genetic Algorithm for Predicting Road Roughness Coefficient 920
Liang Qin, Kaiyue Yin

Analysis of Chinese Mainland Public Sentiment to the Novel Coronavirus Outbreak on Social Media 925
Jingxin Chen, Junfeng Xue, Bingke Zhu, Xinqi Hu, Ziqi Su, Xing Tao, Hongwei Lin

A multidimensional indicator prediction assessment method based on time series and multiple linear regression model 934
Xu Ren

Neural Active Sensing Vision and Manipulation for Cooperative Agents 942
Chenghao Wang, Chaoyi Tan, Linzhen Zhu, Rui Yang, Jiaqi Hong

Research on Campus Network Security Situational Awareness Technology Based on XGBoost Machine Learning 948
Yali Guo, Meng Chen, Can Yuan, Fei Zheng

iPT-BFL: A TATA promoter prediction model based on Boundary Focus Loss 953
Peng Wu, Wei Huang, Bo Liu, Zhenlin Liu

Author Index 957