2024 International Conference on Quantum Information and Quantum Computing (QIQC 2024)

Dubai, United Arab Emirates
15-16 June 2024

IEEE Catalog Number: CFP24VZ3-POD
ISBN: 979-8-3503-7875-7

IEEE
Advancing Technology for Humanity

Copyright © 2024, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP24VZ3-POD
ISBN (Print-On-Demand):	979-8-3503-7875-7
ISBN (Online):	979-8-3503-7874-0

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com



TABLE OF CONTENTS

Research on the Application of Big Data Technology in Smart Campus Security Early Warning System 1
Ying Zhang, Xiang Ji, Yue Liu

Machine Learning-Based Regression Prediction Model of Used Sailboat Price 7
Guang Shi, Yibin Hu, Qinghao Yu, Xingyu Wang, Lu Bi

Research on Optimization of Human Resource Management Based on Artificial Intelligence 14
Fenfen Zhang

Design and Implementation of Computer Aided Human Resource Management System 20
Fenfen Zhang

Application of Recurrent Neural Network in Gene Sequence Analysis and Prediction 26
Zhengdi Sima, Zhaochen Liu, Zhengxi Wang

WineNet: A Wine Classification Model Based on Electronic Nose 32
Yichen Zheng

The Real-Time Mask Detection in Public Spaces Using YOLOv5 38
Zheng Dong

Application of Support Vector Machine (SVM) in Teacher Performance Evaluation 44
Ying Li, Jiaqi Liu

Solutions of Airspace Conflicts Based on Raster Method and Monte Carlo Method 50
Xin Shu, Yuxin Ma, Zhenqi Hu, Guohu Feng

Large Language Model Based Multimodal Translation System 58
Jing Zheng

Simulation Design of Robot Flexible Manufacturing Production Line Based on Deep Reinforcement Learning Algorithm 67
Cuihua Wei

Research on the Key Technologies of Robot Grasping Based on Deep Learning 73
Libo Yang

A Novel RSSI Fingerprint Localization Method Based on Feature Learning 80
Zijin Wu, Zhongliang Deng

Design and Implementation of High-Performance and High-Reliability Programming Architecture Based on Soc Chip 90
He Hengxiang, Xing Yuhang, Zhang Yuxuan, Wei Yi, Ren Xinyue

Practical Application of Face Recognition Technology in Financial Anti-Fraud Big Data Analysis System 96
Lanye Zhang

Enhanced Lightweight YOLO-MCA Algorithm for Distracted Driving Detection 102
Weixiao Li

FPGA-Based Implementation of Gigabit Ethernet Communication 109
Jintao Lin

GBC: GameScript Generation Using BERT Classification : Enhancing Interactive Narratives with LLM 114
Jiahua Zhang

A 4T SRAM-Based Parallel In-Memory Computing Macro for Normal and Cryogenic Computing 119
Yifan Wang, Yiming Jin, Tongxi Wang, Botao Xiong

Application of Artificial Intelligence and Big Data in Enterprise Financial Risk Management 126
Cuiping Liu

Optimizing MCMC-Driven Bayesian Neural Networks for High-Precision Medical Image Classification in Small Sample Sizes 132
Mingyu Sun

Code Reuse Detection Model for Semantic Similarity Comparison 138
Xi Guo, Wang Pan

Research on Optimization and Application of Intelligent Manufacturing System Based on Robots 143
Zixuan Ma, Xiaoyuan Li

Dynamic Performance Analysis and Control Strategy Research of Hydraulic Servo System 150
Yujun Li

Research on the Teaching of Modern Chinese Tones Based on Speech Acoustics Experiments 156
Shiliang Lyu, Qianqian Ma, Hanyun Qi, Abuduwaili Alimu

Dijkstra-Based Adaptive MPC Path Planning 161
Pu Hu

The Path to Improve the Innovation Strategy Source Ability of Intelligent Networked Automobile Industry Under the Background of 5G 167
Bin Guo

Brain Tumor Radiogenomic Classification Based on Joint EfficientNet and LSTM 173
Yewen Li

Design of Enterprise Marketing System Based on Big Data 177
Ma Xin

Research and Development of Mobile App for Editing Maps of Intelligent Cleaning Robots 183
Qiao Li, Shuai Fu

Research on the Application of Virtual Reality Technology in College Chinese Language Teaching 188
Ye Luo, Hongya Yu, Xiangping Shen

Application of Big Data Analysis in Evaluation of College Chinese Learning Effectiveness 195
Yue Zhang, Qing Cai, Debin Han

Encyclopedia Service System Based on Multiple Data Sources 200
Bing Sun, Zhen Wang, Jingxiu Song, Xusong Bu, Ruiyuan Kong

Adaptive Shift of Education Teaching in Colleges and Universities based on Generative Artificial Intelligence Scene 206
Wenjing Duan, He Lin

The Research on Innovation of ICT Engineer Training Mode Based on Big Data Technology 211
Hongyuan Wang, Yi Cui

Mining and Analysis of Students' Behavior Patterns Based on Big Data 218
Jiehong Zhou, Jie Yu

Research on the Development and Countermeasures of New Cybercrime Oriented to Deepfake Technology 224
Yihan Lu, Chen Cui, Yingsheng Fan

Calculation Method for Equivalent Ejection Mass of Variable Thrust in the Internal Ballistic Equation of Pyrotechnic Folding Rudder 229
Jiang Junting, Yu Xiyang, Gu Mingfeng, LiuYong, Wu Qian, Yuan Zhendi, Zhou Yuanyuan

Research on the Application of Internet of Things Technology in Environmental Control and Automated Management of Pig Farms 234
Yang Zhou

Quantum State Secure Transmission and Circuit Simulation in Smart Medical Care 240
Chongwei Ren

Research on Access Control Model of Conference System in Small LAN Environment 246
Lu Xiang, Su Yang

Design of a Machine Learning-Based Information Integration System for Local Applied Undergraduate Colleges 251
Yijian Zhang

A Method for Measuring the Initial Group-velocity of Fragments Based on Highspeed Photography 256
Pengzu Liu, Taohu Xu, Guoxiang Dong, Yulong Wang, Jinge Huang

Coupling of Innovation Ecosystem of Automobile Industry Under the Background of Intelligent Internet of Things and Intelligent Communication 263
Bin Guo

Research on Supply Chain Data Security Optimization Algorithm Based on Blockchain and Artificial Intelligence 270
Youqiang Zhao, Hongfei Gao, Xiaolong Wang, Denan Liang, Xiuling Feng, Qinzu Fu

Strategy Design for Card Games Based on Reinforcement Learning 276
Yiming Wang