2023 International Conference on Communications, Computing and Artificial Intelligence (CCCAI 2023)

Shanghai, China
23-25 June 2023

IEEE Catalog Number: CFP23HZ2-POD
ISBN: 979-8-3503-1130-3

Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.
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:	CFP23HZ2-POD
ISBN (Print-On-Demand):	979-8-3503-1130-3
ISBN (Online):	979-8-3503-1129-7

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

2023 International Conference on Communications, Computing and Artificial Intelligence (CCCAI)

CCCAI 2023

Table of Contents

Preface ..... **ix**
Organizing Committee ..... **x**
Reviewers ..... **xii**
Sponsors ..... **xiv**

2023 International Conference on Communications, Computing and Artificial Intelligence (CCCAI)

Deep Semi-Supervised Learning with Fine-Grained Dynamic Weights and Pseudo-Label Constraints 1
Kuan Li (Dongguan University of Technology, China), Qianzhi Lian (Shenzhen University, China), and Can Gao (Shenzhen University, China)

A Comparative Study of DNS Root Query Performance Between Continents 7
Jiajia Zhu (China Academy of Information and Communications Technology, China) and Chao Qi (China Academy of Information and Communications Technology, China)

Study on Radiation Impact of 4G Mobile Communication System on Human Body by EEG in Dhaka .. 12
Baishakhi Shib (Ahsanullah University of Science and Technology, Bangladesh), Shah Mohammed Samin Yeasar (Ahsanullah University of Science and Technology, Bangladesh), Mahadi Hassan (Ahsanullah University of Science and Technology, Bangladesh), Ridoy Islam (Ahsanullah University of Science and Technology, Bangladesh), and A.K.M. Ehtesanul Islam (Ahsanullah University of Science and Technology, Bangladesh)

Knowledge-Guided Aspect-Based Summarization 17
Ziqian Luo (Oracle Cloud Infrastructure, USA)

Comparative Analysis of NLP Models for Detecting Depression on Twitter 23
Khushi Gupta (Sam Houston State University, USA), Razaq Jinad (Sam Houston State University, USA), and Qingzhong Liu (Sam Houston State University, USA)

Markov Model for French-Wolof Text Analysis 29
Abdoulaye Déthié Sarr (University of Alioune Diop, Senegal), Demba Kandé (University of Alioune Diop, Senegal), and Fodé Camara (University of Alioune Diop, Senegal)

Solving the Multi-Tasking Robust Optimization on Networks via Structural Reconstructions Using a Multi-Factor Evolutionary Algorithm 35
Minghao Chen (Sun Yat-sen University, China), Shuai Wang (Sun Yat-sen University, China), and Zhaoxi Ou (Sun Yat-sen University, China)

Anglo-Bangla Language-Based AI Chatbot for Bangladeshi University Admission System 42
Koushik Chandra Sarker (Southeast University, Bangladesh), Md. Mijanur Rahman (Southeast University, Bangladesh), and Abu Siam (Bangladesh University of Engineering and Technology, Bangladesh)

A Weakly Supervised Multi-Instance Learning Based on Graph Neural Network for Breast Cancer Pathology Image Classification 47
Xiaoyu Li (Zhengzhou University, China), Bei Yang (Zhengzhou University, China), Tiandong Chen (Henan Cancer Hospital, China), Shunsen Lv (Zhengzhou University, China), Zheng Gao (Zhengzhou University, China), and Huijie Li (Henan University of Technology, China)

Feature Alignment and Contrastive Learning for Dense Instance Segmentation 52
Feng He (Huazhong Agricultural University, China), Ziyang Rong (Huazhong Agricultural University, China), Yehao Jiang (Huazhong Agricultural University, China), and Fuchuan Ni (Huazhong Agricultural University; Ministry of Education; Ministry of Agriculture and Rural Affairs, China)

Reinforcement Learning for Optimizing Age of Information and Energy Consumption in Misson-Critical IoT 57
Xianzhe Xu (Southeast University, China), Nan Liu (Southeast University, China), and Zhiwen Pan (Southeast University, China)

CvTSRR: A Convolutional Vision Transformer Based Method for Social Relation Recognition 64
Shahana Shultana (Priarie View A&M University, USA), Lin Li (Priarie View A&M University, USA), and Na Li (Priarie View A&M University, USA)

Design and Control of Multi-Mode Wheeled-Bipedal Robot with Parallel Mechanism 69
Zeyi Yang (Southern University of Science and Technology, China), Zekun Bian (Southern University of Science and Technology, China), and Wei Zhang (Southern University of Science and Technology, China)

Utilizing Deep Learning for Automated Tuning of Database Management Systems 75
Karthick Gunasekaran (University of Massachusetts Amherst), Kajal Tiwari (University of Massachusetts Amherst), and Rachana Acharya (University of Massachusetts Amherst)

Proposal for the Design of an Articulable Robot for Taking Low-Cost Measurements in the Preoperative Phase of Maxillofacial Surgery 82
Alexander Carlos Mendoza Puris (Universidad Continental, Perú), Anthony Jesus Arhuis Quintana (Universidad Continental, Perú), Juan Carlos Stiven Solorzano Quintana (Universidad Continental, Perú), and Frank William Zarate Peña (Universidad Continental, Perú)

Machine Learning Prediction of LOS Probability in Urban Environments 87
yutong Wu (Huazhong University of Science and Technology, China)

A benchmark study of protein folding algorithms on nanobodies 92
Shibo Liang (Shenzhen Technology University, China), Ziquan Liang (Shenzhen Technology University, China), Zecheng Wu (Shenzhen Technology University, China), Feijuan Huang (Shenzhen Institute of Translational Medicine, China), Xu Wang (Jilin University, China), Yuanzhe Cai (Shenzhen Technology University, China), Bingding Huang (Shenzhen Technology University, China), and Xin Wang (Shenzhen Technology University, China)

Research on Power Marketing Data Sharing Framework Based on Semi-Supervised Vertical Federated Learning 98
Zhitao Liu (University of Jinan College of Information Science and Engineering, China), Shanshan Wang (University of Jinan College of Information Science and Engineering, China), Zhenxiang Chen (University of Jinan College of Information Science and Engineering, China), Yanqi Song (University of Jinan College of Information Science and Engineering, China), and Yadi Han (University of Jinan College of Information Science and Engineering, China)

Energy Saving Research on Auxiliary Task Unloading and Resource Allocation of UAV Based on Edge Computing 103
Haohao Bai (Shandong Normal University), Zhineng Luo (Shandong Normal University), Meihui Chen (Shandong Normal University), and Senke Gui (Shandong Normal University)

CLGP: Multi-Feature Embedding Based Cross-Attention for Chinese NER 109
Pengnian Qi (Renmin University of China, China), Peng Li (Zhongyuan Bank, China), and Biao Qin (Renmin University of China, China)

Multi-View Canonical Representation Discriminant Analysis 114
Hailang Du (Chinese Flight Test Establishment, China) and Honggang Li (Chinese Flight Test Establishment, China)

Automated Lineage Inference Among Malware Families 119
Shufei Li (Institute of Information Engineering, Chinese Academy of Science, China), Ruigang Liang (Institute of Information Engineering, Chinese Academy of Sciences, China), Hanbing Yan (China Computer Emergency Response Team, China), and Xuhua Bao (Sangfor Technologies Inc, China)

A Novel Face Recognition Model Based on Feature Registration 127
Naifu Ye (People's Public Security University of China, China), Zirui Liu (People's Public Security University of China, China), Deyu Yuan (People's Public Security University of China, China), Shicong Chen (People's Public Security University of China, China), and Zhi Zhang (People's Public Security University of China, China)

Chinese Event Extraction Method Based on Abstract Meaning Representation Graph 132
Shuo Niu (People's Public Security University of China, China), Naifu Ye (People's Public Security University of China, China), Haichun Sun (People's Public Security University of China, China), and Nan Jia (People's Public Security University of China, China)

Dynamic AP Association for UAV-Centric Aerial-Ground Communication with Cell-Free Massive MIMO 139
Ke Shi (Southeast University - Monash University, China), Zhuoyin Dai (Southeast University, China), and Yong Zeng (Southeast University; Purple Mountain Laboratories, China)

Efficient Dialogue State Tracking Based on Dialogue-Level State Prediction and Historical Dialogue State Deletion 145
Junyuan Hu (Heilongjiang University, China) and Long Tan (Heilongjiang University, China)

EAD-YOLO: Improved YOLOv5 for Endoscopic Artefact Detection 151
Zhaoyu Yuan (Beijing Institute of Technology, China), Jing Ye (Beijing Institute of Technology, China), Cheng Qian (Beijing Institute of Technology, China), and Xiaoqiong Li (Beijing Institute of Technology, China)

Contour Refinement for Box Based Interactive Object Segmentation 159
Jing Ma (Nanjing University of Science and Technology, China), Ran Shi (Nanjing University of Science and Technology, China), and Xiaobo Shen (Nanjing University of Science and Technology, China)

Infrared Small Target Detection Based on Facet Kernel and Global Contrast Measure 164
Ye Tang (Beijing Aerospace Institute for Metrology and Measurement Technology, China), Kun Xiong (Beijing Aerospace Institute for Metrology and Measurement Technology, China), and Chunxi Wang (Beijing Aerospace Institute for Metrology and Measurement Technology, China)

GAM-YOLOv3A Lightweight Object Detection Network based on GhostBottleneck and CBAM 170
Yuanya Tu (Lenovo Group, China), Pan Yu (Lenovo Group, China), and Hui Sun (Lenovo Group, China)

Synthesizing Virtual Night Scene on OpenStreetMap 177
Wanwan Li (University of South Florida, USA)

Classifying user Interaction Activity in Task Mining 182
Sumit Sakhawat H (August-Wilhelm Scheer Institut für digitale Produkte und Prozesse gGmbH, Germany), Kornahrens Lars D (August-Wilhelm Scheer Institut für digitale Produkte und Prozesse gGmbH, Germany), Greff Tobias (August-Wilhelm Scheer Institut für digitale Produkte und Prozesse gGmbH, Germany), and Dr. Werth Dirk (August-Wilhelm Scheer Institut für digitale Produkte und Prozesse gGmbH, Germany)

HFLIC: Human Friendly Perceptual Learned Image Compression with Reinforced Transform 188
Peirong Ning (Peking University), Wei Jiang (Peking University), and Ronggang Wang (Peking University)

Author Index **195**