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AI 2023: Advances in Artificial Intelligence

36th Australasian Joint Conference on Artificial Intelligence, AI 2023
Brisbane, QLD, Australia, November 28 – December 1, 2023
Proceedings, Part II

2
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Tongliang Liu · Geoff Webb · Lin Yue ·
Dadong Wang
Editors

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Preface

This volume contains the papers presented at the 36th Australasian Joint Conference on Artificial Intelligence, AJCAI 2023. The conference was held during November 28 – December 1, 2023, and was hosted by the University of Queensland in Brisbane, Australia. This annual conference is one of the longest running conferences in artificial intelligence, with the first conference held in Sydney in 1987. The conference remains the premier event for artificial intelligence in Australasia, offering a forum for researchers and practitioners across all subfields of artificial intelligence to meet and discuss recent advances.

AJCAI 2023 received 213 submissions and each submission was reviewed by at least two Program Committee (PC) members or external reviewers in a double-blind process (over 90% of the submissions had three reviews). After a thorough discussion and rigorous scrutiny by the reviewers, 24 papers were accepted for long oral presentation and 58 papers were accepted for oral presentation at the conference. In total, 82 submissions were accepted for publication as full papers in these proceedings with an acceptance rate of 38% (the acceptance rate of the long oral presentations was 11%). AJCAI 2023 had six keynote talks by the following distinguished scientists: Ling Chen from the University of Technology Sydney, Australia; Manik Varma from Microsoft Research India, India; Peter Soyer from the University of Queensland, Australia; Maria Garcia De La Banda from Monash University, Australia; Mengjie Zhang from Victoria University of Wellington, New Zealand; and Dadong Wang from Data61, Australia.

The following are notable aspects of the AJCAI 2023 conference:

- AJCAI 2023 was jointly held with the Defence Artificial Intelligence 2023 Symposium (November 27, 2023). The Defence Artificial Intelligence Symposium is an exciting opportunity for Defence and AI researchers to come together and explore priorities, opportunities, and commonalities.
- AJCAI 2023 included a day with a special industry focus. Panel discussions allowed industry and academia to share challenges and research directions.
- AJCAI 2023 included four workshops, held on November 28: Foundations for Robust AI: Self-Supervised Learning, organised by Saimunur Rahman, David Hall, Stephen Hausler, and Peyman Moghadam; Federated Learning in Australasia: When FL Meets Foundation Models, organised by Guodong Long, Han Yu, and Tao Shen; Artificial Intelligence Enabled Trustworthy Recommendations, organised by Shoujin Wang, Rocky Tong Chen, Hongzhi Yin, Lina Yao, and Fang Chen; and Machine Learning for Data-Driven Optimization, organised by Xilu Wang, Xiangyu Wang, Shiqing Liu, and Yaochu Jin.
- AJCAI 2023 included three tutorials, held on November 28: Reinforcement Learning for Automated Negotiation Supply Chain Management League as an Example, presented by Yasser Mohammad; Towards Communication-Efficient and Heterogeneity-Robust Federated Learning, presented by Guodong Long and Yue Tan; and Decoding

the Grammar of DNA Using Natural Language Processing, presented by Tyrone Chen and Sonika Tyagi.

- AJCAI 2023 included a PhD Forum, held on November 28, to mentor and assist post-graduate students developing their research, with mentorship provided by research leaders. Limited travel support was provided.

We especially appreciate the work of the members of the Program Committee and the external reviewers for their expertise and tireless effort in assessing the papers within a strict timeline. We are also very grateful to the members of the Organising Committee for their efforts in the preparation, promotion, and organisation of the conference, especially the General Chairs, Dacheng Tao, Sally Cripps, and Janet Wiles, for coordinating the whole event.

Lastly, we thank the National Committee for Artificial Intelligence of the Australian Computer Society; Springer, for the professional service provided by the Lecture Notes in Artificial Intelligence editorial and publishing teams; and our conference sponsors: the Australian Computer Society; the Defence Artificial Intelligence Research Network; Pioneer Computers; the School of Computer Science at the University of Sydney; the School of Electrical Engineering and Computer Science at the University of Queensland; the Human Technology Institute at the University of Technology Sydney; the Adelaide University; and the UNSW AI Institute.

October 2023

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Contents – Part II

Knowledge Representation and NLP

Collaborative Qualitative Environment Mapping	3
<i>Adeline Secolo, Paulo E. Santos, Patrick Doherty, and Zoran Sjanic</i>	
Towards Learning Action Models from Narrative Text Through Extraction and Ordering of Structured Events	16
<i>Ruiqi Li, Patrik Haslum, and Leyang Cui</i>	
The Difficulty of Novelty Detection and Adaptation in Physical Environments	28
<i>Vimukthini Pinto, Chathura Gamage, Matthew Stephenson, and Jochen Renz</i>	
Lateral AI: Simulating Diversity in Virtual Communities	41
<i>Fedja Hadzic and Maya Krayneva</i>	
Reports, Observations, and Belief Change	54
<i>Aaron Hunter</i>	
A Prompting Framework to Enhance Language Model Output	66
<i>Himath Ratnayake and Can Wang</i>	
Epistemic Reasoning in Computational Machine Ethics	82
<i>Raynaldio Limarga, Yang Song, Maurice Pagnucco, and David Rajaratnam</i>	
Using Social Sensing to Validate Flood Risk Modelling in England	95
<i>Joshua Joyce, Rudy Arthur, Guangtao Fu, Alina Bialkowski, and Hywel Williams</i>	
Symbolic Data Analysis to Improve Completeness of Model Combination Methods	107
<i>Pedro Strecht, João Mendes-Moreira, and Carlos Soares</i>	
CySpider: A Neural Semantic Parsing Corpus with Baseline Models for Property Graphs	120
<i>Ziyu Zhao, Wei Liu, Tim French, and Michael Stewart</i>	

S5TR: Simple Single Stage Sequencer for Scene Text Recognition 133
Zhijian Wu, Jun Li, and Jianhua Xu

Explainable AI

Coping with Data Distribution Shifts: XAI-Based Adaptive Learning
with SHAP Clustering for Energy Consumption Prediction 147
*Tobias Clement, Hung Truong Thanh Nguyen, Nils Kemmerzell,
Mohamed Abdelaal, and Davor Stjelja*

Concept-Guided Interpretable Federated Learning 160
Jianan Yang and Guodong Long

Systematic Analysis of the Impact of Label Noise Correction on ML
Fairness 173
Inês Oliveira e Silva, Carlos Soares, Inês Sousa, and Rayid Ghani

Part-Aware Prototype-Aligned Interpretable Image Classification
with Basic Feature Domain 185
Liangping Li, Xun Gong, Chenzhong Wang, and Weiji Kong

Hybrid CNN-Interpreter: Interpret Local and Global Contexts
for CNN-Based Models 197
*Wenli Yang, Guan Huang, Renjie Li, Jiahao Yu, Yanyu Chen,
and Quan Bai*

Impact of Fidelity and Robustness of Machine Learning Explanations
on User Trust 209
Bo Wang, Jianlong Zhou, Yiqiao Li, and Fang Chen

Interpretable Drawing Psychoanalysis via House-Tree-Person Test 221
Yaowu Xie, Ting Pan, Baodi Liu, Honglong Chen, and Weifeng Liu

A Non-asymptotic Risk Bound for Model Selection in a High-Dimensional
Mixture of Experts via Joint Rank and Variable Selection 234
*TrungTin Nguyen, Dung Ngoc Nguyen, Hien Duy Nguyen,
and Faicel Chamroukhi*

Reinforcement Learning

Auction-Based Allocation of Location-Specific Tasks 249
Fahimeh Ramezani, Brendan Sims, and Haris Aziz

<p>Generalized Bargaining Protocols <i>Yasser Mohammad</i></p>	<p>261</p>
<p>SAGE: Generating Symbolic Goals for Myopic Models in Deep Reinforcement Learning <i>Andrew Chester, Michael Dann, Fabio Zambetta, and John Thangarajah</i></p>	<p>274</p>
<p>Leaving the NavMesh: An Ablative Analysis of Deep Reinforcement Learning for Complex Navigation in 3D Virtual Environments <i>Dale Grant, Jaime Garcia, and William Raffe</i></p>	<p>286</p>
<p>Transformed Successor Features for Transfer Reinforcement Learning <i>Kiyoshige Garces, Junyu Xuan, and Hua Zuo</i></p>	<p>298</p>
<p>Cooperative Multi-Agent Reinforcement Learning with Dynamic Target Localization: A Reward Sharing Approach <i>Helani Wickramaarachchi, Michael Kirley, and Nicholas Geard</i></p>	<p>310</p>
<p>Competitive Collaboration for Complex Task Learning in Agent Systems <i>Dilini Samarasinghe, Michael Barlow, and Erandi Lakshika</i></p>	<p>325</p>
<p>Limiting Inequalities in Repeated House and Task Allocation <i>Martin Aleksandrov</i></p>	<p>338</p>
<p>Non-stationarity Detection in Model-Free Reinforcement Learning via Value Function Monitoring <i>Maryem Hussein, Marwa Keshk, and Aya Hussein</i></p>	<p>350</p>
<p>Toward a Unified Framework for RGB and RGB-D Visual Navigation <i>Heming Du, Zi Huang, Scott Chapman, and Xin Yu</i></p>	<p>363</p>
<p>Improving CCA Algorithms on SSVEP Classification with Reinforcement Learning Based Temporal Filtering <i>Liang Ou, Thomas Do, Xuan-The Tran, Daniel Leong, Yu-Cheng Chang, Yu-Kai Wang, and Chin-Teng Lin</i></p>	<p>376</p>
<p>Evolving Epidemic Management Rules Using Deep Neuroevolution: A Novel Approach to Inspection Scheduling and Outbreak Minimization <i>Victoria Huang, Chen Wang, Samik Datta, Bryce Chen, Gang Chen, and Hui Ma</i></p>	<p>387</p>

Genetic Algorithm

A Semantic Genetic Programming Approach to Evolving Heuristics for Multi-objective Dynamic Scheduling	403
<i>Meng Xu, Yi Mei, Fangfang Zhang, and Mengjie Zhang</i>	
XC-NAS: A New Cellular Encoding Approach for Neural Architecture Search of Multi-path Convolutional Neural Networks	416
<i>Trevor Londt, Xiaoying Gao, Peter Andreae, and Yi Mei</i>	
Bloating Reduction in Symbolic Regression Through Function Frequency-Based Tree Substitution in Genetic Programming	429
<i>Mohamad Rimas, Qi Chen, and Mengjie Zhang</i>	
Generating Collective Motion Behaviour Libraries Using Developmental Evolution	441
<i>Md Khan, Kathryn Kasmarik, Michael Barlow, Shadi Abpeikar, Huanneng Qiu, Essam Debie, and Matt Garratt</i>	
A Group Genetic Algorithm for Energy-Efficient Resource Allocation in Container-Based Clouds with Heterogeneous Physical Machines	453
<i>Zhengxin Fang, Hui Ma, Gang Chen, and Sven Hartmann</i>	
Genetic Programming with Adaptive Reference Points for Pareto Local Search in Many-Objective Job Shop Scheduling	466
<i>Atiya Masood, Gang Chen, Yi Mei, Harith Al-Sahaf, and Mengjie Zhang</i>	
A Study of Fitness Gains in Evolving Finite State Machines	479
<i>Gábor Zoltai, Yue Xie, and Frank Neumann</i>	
Author Index	491

Contents – Part I

Computer Vision

Multi-graph Laplacian Feature Mapping Incorporating Tag Information for Image Annotation	3
<i>Yan Liu, Qianqian Shao, Rui Cheng, Weifeng Liu, and Baodi Liu</i>	
Short-Term Solar Irradiance Forecasting from Future Sky Images Generation	15
<i>Hoang Chuong Nguyen and Miaomiao Liu</i>	
No Token Left Behind: Efficient Vision Transformer via Dynamic Token Idling	28
<i>Xuwei Xu, Changlin Li, Yudong Chen, Xiaojun Chang, Jiajun Liu, and Sen Wang</i>	
Story Sifting Using Object Detection Techniques	42
<i>Wilkins Leong, Julie Porteous, and Jonathan Thangarajah</i>	
SimMining-3D: Altitude-Aware 3D Object Detection in Complex Mining Environments: A Novel Dataset and ROS-Based Automatic Annotation Pipeline	55
<i>Mehala Balamurali and Ehsan Mihankhah</i>	
Oyster Mushroom Growth Stage Identification: An Exploration of Computer Vision Technologies	67
<i>Lipin Guo, Wei Emma Zhang, Weitong Chen, Ni Yang, Queen Nguyen, and Trung Duc Vo</i>	
Handling Heavy Occlusion in Dense Crowd Tracking by Focusing on the Heads	79
<i>Yu Zhang, Huaming Chen, Zhongzheng Lai, Zao Zhang, and Dong Yuan</i>	
SAR2EO: A High-Resolution Image Translation Framework with Denoising Enhancement	91
<i>Shenshen Du, Jun Yu, Guochen Xie, Renjie Lu, Pengwei Li, Zhongpeng Cai, and Keda Lu</i>	
A New Perspective of Weakly Supervised 3D Instance Segmentation via Bounding Boxes	103
<i>Qingtao Yu, Heming Du, and Xin Yu</i>	

Large-Kernel Attention Network with Distance Regression and Topological Self-correction for Airway Segmentation	115
<i>Yan Hu, Erik Meijering, and Yang Song</i>	
Deep Learning	
WeightRelay: Efficient Heterogeneous Federated Learning on Time Series	129
<i>Wensi Tang and Guodong Long</i>	
Superpixel Attack: Enhancing Black-Box Adversarial Attack with Image-Driven Division Areas	141
<i>Issa Oe, Keiichiro Yamamura, Hiroki Ishikura, Ryo Hamahira, and Katsuki Fujisawa</i>	
Cross Domain Pulmonary Nodule Detection Without Source Data	153
<i>Rui Xu, Yong Luo, and Yan Xu</i>	
3RE-Net: Joint Loss-REcovery and Super-REsolution Neural Network for REal-Time Video	165
<i>Liming Ge, David Zhaochen Jiang, and Wei Bao</i>	
Neural Networks in Forecasting Financial Volatility	178
<i>Wenbo Ge, Pooia Lalbakhsh, Leigh Isai, and Hanna Suominen</i>	
CLIP-Based Composed Image Retrieval with Comprehensive Fusion and Data Augmentation	190
<i>Haoqiang Lin, Haokun Wen, Xiaolin Chen, and Xuemeng Song</i>	
LiDAR Inpainting of UAV Based 3D Point Cloud Using Supervised Learning	203
<i>Muhammad Talha, Aya Hussein, and Mohammed Hossny</i>	
A Sampling Method for Performance Predictor Based on Contrastive Learning	215
<i>Jingrong Xie, Yuqi Feng, and Yanan Sun</i>	
AdaptMatch: Adaptive Consistency Regularization for Semi-supervised Learning with Top-k Pseudo-labeling and Contrastive Learning	227
<i>Nan Yang, Fan Huang, and Dong Yuan</i>	
Estimation of Unmasked Face Images Based on Voice and 3DMM	239
<i>Tetsumaru Akatsuka, Ryohei Orihara, Yuichi Sei, Yasuyuki Tahara, and Akihiko Ohsuga</i>	

<p>Aging Contrast: A Contrastive Learning Framework for Fish Re-identification Across Seasons and Years</p> <p style="margin-left: 2em;"><i>Weili Shi, Zhongliang Zhou, Benjamin H. Letcher, Nathaniel Hitt, Yoichiro Kanno, Ryo Futamura, Osamu Kishida, Kentaro Morita, and Sheng Li</i></p>	<p>252</p>
<p>Spatial Bottleneck Transformer for Cellular Traffic Prediction in the Urban City</p> <p style="margin-left: 2em;"><i>Hexuan Weng, Yanbin Liu, and Ling Chen</i></p>	<p>265</p>
<p>MIDGET: Music Conditioned 3D Dance Generation</p> <p style="margin-left: 2em;"><i>Jinwu Wang, Wei Mao, and Miaomiao Liu</i></p>	<p>277</p>
<p>Machine Learning and Data Mining</p>	
<p>Minimum Message Length Inference of the Weibull Distribution with Complete and Censored Data</p> <p style="margin-left: 2em;"><i>Enes Makalic and Daniel F. Schmidt</i></p>	<p>291</p>
<p>Multiple Teacher Model for Continual Test-Time Domain Adaptation</p> <p style="margin-left: 2em;"><i>Ran Wang, Hua Zuo, Zhen Fang, and Jie Lu</i></p>	<p>304</p>
<p>Causal Disentanglement for Adversarial Defense</p> <p style="margin-left: 2em;"><i>Ji-Young Park, Lin Liu, Jixue Liu, and Jiuyong Li</i></p>	<p>315</p>
<p>Gemini: A Dual-Task Co-training Model for Partial Label Learning</p> <p style="margin-left: 2em;"><i>Beibei Li, Senlin Shu, Beihong Jin, Tao Xiang, and Yiyuan Zheng</i></p>	<p>328</p>
<p>Detecting Stress from Multivariate Time Series Data Using Topological Data Analysis</p> <p style="margin-left: 2em;"><i>Hieu Vu Tran, Carolyn McGregor, and Paul J. Kennedy</i></p>	<p>341</p>
<p>Mining Label Distribution Drift in Unsupervised Domain Adaptation</p> <p style="margin-left: 2em;"><i>Peizhao Li, Zhengming Ding, and Hongfu Liu</i></p>	<p>354</p>
<p>Automatic Classification of Sensors in Buildings: Learning from Time Series Data</p> <p style="margin-left: 2em;"><i>Mashud Rana, Ashfaqur Rahman, Mahathir Almashor, John McCulloch, and Subbu Sethuvenkatraman</i></p>	<p>367</p>
<p>An Integrated Federated Learning and Meta-Learning Approach for Mining Operations</p> <p style="margin-left: 2em;"><i>Venkat Munagala, Sankhya Singh, Srikanth Thudumu, Irini Logothetis, Sushil Bhandari, Amit Bhandari, Kon Mouzakis, and Rajesh Vasa</i></p>	<p>379</p>

An Augmented Learning Approach for Multiple Data Streams Under
Concept Drift 391
Kun Wang, Jie Lu, Anjin Liu, and Guangquan Zhang

Sequence Unlearning for Sequential Recommender Systems 403
Shanshan Ye and Jie Lu

MPANet: Multi-scale Pyramid Attention Network for Collaborative
Modeling Spatio-Temporal Patterns of Default Mode Network 416
Hang Yuan, Xiang Li, and Benzhenh Wei

Optimization

Dynamic Landscape Analysis for Constrained Multiobjective Optimization
Problems 429
Hanan Alsouly, Michael Kirley, and Mario Andrés Muñoz

Finding Maximum Weakly Stable Matchings for Hospitals/Residents
with Ties Problem via Heuristic Search 442
Son Thanh Cao, Le Van Thanh, and Hoang Huu Viet

Approximating Solutions to the Knapsack Problem Using the Lagrangian
Dual Framework 455
Mitchell Keegan and Mahdi Abolghasemi

An Optimised Grid Search Based Framework for Robust Large-Scale
Natural Soundscape Classification 468
Thomas Napier, Euijoon Ahn, Slade Allen-Ankins, and Ickjai Lee

Medical AI

Interpretable 3D Multi-modal Residual Convolutional Neural Network
for Mild Traumatic Brain Injury Diagnosis 483
Hanem Ellethy, Viktor Vegh, and Shekhar S. Chandra

Comparative Assessment of Machine Learning Strategies
for Electrocardiogram Denoising 495
*Brenda Wang, Chirath Hettiarachchi, Hanna Suominen,
and Elena Daskalaki*

COVID-19 Fake News Detection Using Cross-Domain Classification
Techniques 507
*Arnav Sharma, Subhanjali Sharma, Utkarsh Bhardwaj, Sajib Mistry,
Novarun Deb, and Aneesh Krishna*

Context-Based Masking for Spontaneous Venous Pulsations Detection 520
Hongwei Sheng, Xin Yu, Xue Li, and Mojtaba Golzan

Beyond Model Accuracy: Identifying Hidden Underlying Issues in Chest
X-ray Classification 533
*Richard Wainwright, Danny Wang, Harrison Layton,
and Alina Bialkowski*

Enhance Reading Comprehension from EEG-Based Brain-Computer
Interface 545
Xinping Liu and Zehong Cao

Author Index 557