

# **2023 9th International Conference on Web Research (ICWR 2023)**

**Tehran, Iran  
3-4 May 2023**



**IEEE Catalog Number: CFP23F61-POD**  
**ISBN: 979-8-3503-9970-7**

**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:	CFP23F61-POD
ISBN (Print-On-Demand):	979-8-3503-9970-7
ISBN (Online):	979-8-3503-9969-1

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

File	Title	Page
ICWR202301	A Novel Fuzzy Logic-based Method for Modeling and Recognizing Yoga Pose	1
ICWR202302	Sentiment Analysis of Twitter Data Towards COVID-19 Vaccines using a Deep Learning Approach	7
ICWR202303	Evaluation of Improved K-Nearest Neighbors for Indoor Positioning System in Real Complex Buildings	12
ICWR202304	Sentiment Analysis of Persian Political Tweets Using ParsBERT Embedding Model with Convolutional Neural Network	20
ICWR202305	Identifying And Prioritizing the Effective Factors on the Utilization of Social Business Intelligence in Organization	26
ICWR202306	A Persian Wake Word Detection System Based on the Fine Tuning of a Universal Phone Decoder and Levenshtein Distance	35
ICWR202307	Efficient Still Image Action Recognition by the Combination of Ensemble Learning and Knowledge Distillation	41
ICWR202308	CDP: Selective Influential Nodes based on Cliques in the Diffusion Process in Social Networks	46
ICWR202309	Identify Initial Nodes for Spreader in a New Diffusion Model Based on Topology (DBT) in Social Networks	52
ICWR202310	Preventing the Elderly with Diabetes from the Risk of Falling using a Multilayer Perception Classifier	58
ICWR202311	An Efficient Algorithm for Influence Maximization in Signed Social Networks	63
ICWR202312	Using Non-Negative Matrix Factorization to Identify the Factors Affecting the Performance of Bank Employees in Australia	74
ICWR202313	MFS: A Serverless FaaS Simulator	81
ICWR202314	Ford Motor Company E-Commerce Development on Social Networks based on HED Feature Extraction, Machine Learning and Alan Mulally's Strategy	87
ICWR202315	IoT-Based Classification and Differential Diagnosis of COVID-19 from CT Images using DexiNed Filter, Image Blending and Weighted Ensemble CNNs	95
ICWR202316	MBTI-based Personality Assessment Through Introducing a Puzzle Game	102
ICWR202317	A Novel CNN-LSTM Model for Predicting the Railway Sector Stock Price in the Tehran Stock Exchange	108
ICWR202318	Using Supervised Machine Learning Approaches to Detect Fraud in The Banking Transaction Network	115
ICWR202319	Bibliometric Analysis of Artificial Intelligence in Drug Development	120
ICWR202320	An Ensemble Learning Approach for SMS Spam Detection	125
ICWR202321	A Machine Learning-based Approach for Medical Insurance Anomaly Detection by Predicting Indirect Outpatients' Claim Price	129
ICWR202322	Evaluating Security Anomalies by Classifying Traffic Using Deep Learning	135

File	Title	Page
ICWR202323	Big Data Reference Architecture Standards: Analysis and Presenting a Development Road Map	142
ICWR202324	Supervised Machine Learning Models for Multiple Sclerosis Relapse Probability Prognosis using Clinical Data	150
ICWR202325	L-Atur, a Generative Design L-Systems Based Web Application with a Human-Machine Collaboration Approach	156
ICWR202326	Real-Time Blood Pressure Prediction Using Apache Spark and Kafka Machine Learning	161
ICWR202327	Hyper-parameter Optimization of LSTM Network Using Genetic Algorithm and Q-Learning Algorithm for Classification of COVID-19 Dataset	167
ICWR202328	Real-Time Bitcoin Price Prediction Using Hybrid 2D-CNN LSTM Model	173
ICWR202329	Providing a Solution for Optimal Management of Resources using the Multi-Objective Crow Search Algorithm in Cloud Data Centers	179
ICWR202330	Fuzzy-ID3 Algorithm for Breast Cancer Disease Classification	185
ICWR202331	Product Recommender System using Hypergraph Neural Networks	189
ICWR202332	A System to Privacy Preserving and Guarantee Worker Rewards in Blockchain-Based Crowdsourcing	196
ICWR202333	Energy Efficiency and Establishing Service Level Agreement using Fuzzification of Virtual Machine Selection Policies for Migrating in Cloud Computing	201
ICWR202334	Stream Data Classification with Hoeffding Tree(An Ensemble Learning Approach)	208
ICWR202335	Improving English to Persian Machine Translation with GPT Language Model and Autoencoders	214
ICWR202336	Farsi CAPTCHA Recognition Using Attention-Based Convolutional Neural Network	221
ICWR202337	Leveraging a Hierarchical Selection of Communities in Social Networks to Maximize Diffusion	227
ICWR202338	Industry 4.0: Underlying Technologies. Industry 5.0: Human-Computer Interaction as a Tech Bridge from Industry 4.0 to Industry 5.0	232
ICWR202339	A Framework for Scalable Object Storage and Retrieval Considering Privacy Concerns: A Case Study on the Signature Detection	237
ICWR202340	A Semi-Automated Labeled Data Generation Approach Based on Deep Learning to Improve Sentiment Analysis in the Persian Language	242
ICWR202341	Evaluation of Supervised Machine Learning Algorithms for Credit Card Fraud Detection: A Comparison	247
ICWR202342	Re-rank Search Engine Results via Machine Learning	253
ICWR202343	Early Discovery of Emerging Entities in Persian Twitter with Semantic Similarity	259
ICWR202344	Complex Network based Efficiency Analysis of Tehran Metro Network	264

File	Title	Page
ICWR202345	Path Designing the Upper Body for Hemiplegic or Semi-Disabled People using Fourier Series Equations	269
ICWR202346	Googling as a Key: Exploring the Relationship between COVID-19 Cases and Internet Search Behavior	272
ICWR202347	Aspect-base Sentiment Analysis with Dual Contrastive Learning	276
ICWR202348	Persian Ezafeh Recognition using Transformer-Based Models	283
ICWR202349	Designing an Integrated Methodology for Data-Driven Marketing Strategic Planning	289
ICWR202350	Analyzing and Improving Prediction of Spatiotemporal Signal Data Using Grid Search on Graph Convolutional Networks	294
ICWR202351	Learning at the Edge: Mobile Edge Computing and Reinforcement Learning for Enhanced Web Application Performance	300
ICWR202352	Drug Recommender System Based on Collaborative Filtering for Multiple Sclerosis Patients	305
ICWR202353	Customer Loyalty Prediction of E-marketplaces Via Review Analysis	311
ICWR202354	IoMT-based Automated Leukemia Classification using CNN and Higher Order Singular Value Decomposition	317
ICWR202355	Towards Web-Based Automation: A Comparative Analysis of Feature Extraction Approaches and Applications for Quality Control	322
ICWR202356	A Sentiment Analysis Dataset Preparation Framework: A Case Study on User Reviews Dataset on Iranian Tourist Destinations	330
ICWR202357	A Blockchain-Based Approach for Data Storage in Drug Supply Chain	335
ICWR202358	Triple A (AAA): a Tool to Analyze Scientific Literature Metadata with Complex Network Parameters	342
ICWR202359	A Review of Methods to Prevent DDOS Attacks Using NFV and SDN	346
ICWR202360	A Context-based Image Retrieval Method for Persian Databases	356
ICWR202361	Effective and Efficient Generation of Candidate Networks for Top-k Keyword Search in Relational Database	362
ICWR202362	Exploring the Potential of Machine Translation for Generating Named Entity Datasets: A Case Study between Persian and English	368