

2020 21st International Arab Conference on Information Technology (ACIT 2020)

Giza, Egypt

28-30 November, 6 October 2020



IEEE Catalog Number: CFP20Q51-POD
ISBN: 978-1-7281-8856-0

**Copyright © 2020 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:	CFP20Q51-POD
ISBN (Print-On-Demand):	978-1-7281-8856-0
ISBN (Online):	978-1-7281-8855-3

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

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

MIGRATING RELATIONAL DATABASES INTO XML DOCUMENTS.....	1
<i>Abdelsalam M. Maatuk, Tawfig Abdelaziz, M. Akhtar Ali</i>	
A CLUSTER CENTER INITIALIZATION METHOD USING HYPERSPACE-BASED MULTI-LEVEL THRESHOLDING (HMLT): APPLICATION TO COLOR ANCIENT DOCUMENT IMAGE DENOISING	12
<i>Walid Elhedda, Maroua Mehri, Mohamed Ali Mahjoub</i>	
APPLICATION OF ENCRYPTION ALGORITHMS WITH RMI PROTOCOL.....	18
<i>Rana Riad K. Al-Taie, Hiba A. Abu-Alsaad</i>	
KEYSTROKE IDENTIFIER USING FUZZY LOGIC TO INCREASE PASSWORD SECURITY	24
<i>Adnan Shaout, Nathan Schmidt</i>	
ISSUES AND CHALLENGES FOR CONTENT-BASED VIDEO SEARCH ENGINES A SURVEY	32
<i>Ahmad Sedky Adly, M. S. Abdelwahab, Islam Hegazy, Taha Elarif</i>	
A HYBRID MODEL FOR ANOMALY-BASED INTRUSION DETECTION IN COMPLEX COMPUTER NETWORKS	50
<i>Danijela Protic, Miomir Stankovic</i>	
A NEW TECHNIQUE OF ECG DENOISING BASED ON LWT AND TOTAL VARIATION MINIMIZATION ECG DENOISING.....	58
<i>Mourad Talbi, Riadh Baazaoui, Med Salim Bouhlef</i>	
LONGEST COMMON SUBSEQUENCE BASED MULTISTAGE COLLABORATIVE FILTERING FOR RECOMMENDER SYSTEMS.....	64
<i>Dilip Singh Sisodia, Inakollu Nehapriyanka, Prodduturi Amulya</i>	
THE ROLE OF E-DIAGNOSIS KNOWLEDGE BASED SYSTEM ON OMANI SOCIETY: SKIN DISEASE AS CASE	69
<i>Nour Eldin Mohamed Elshaiekh, Khalfan Zahran Al Hiji</i>	
EXPLORING CYBER SECURITY MEASURES IN SMART CITIES	73
<i>Rami Mustafa A. Mohammad, Mamoun Masoud Abdulqader</i>	
A FRAMEWORK FOR IMPROVING DATA QUALITY IN DATA WAREHOUSE: A CASE STUDY.....	80
<i>Taghrid Z. Ali, Tawfig M. Abdelaziz, Abdelsalam M. Maatuk, Salwa M. Elakeili</i>	
SENSITIVITY OF DIFFERENT OPTIMIZATION SOLVERS IN LSTM ALGORITHM FOR TEMPERATURE FORECAST OVER MARS AT JEZERO CRATER LANDING SITE.....	88
<i>Mohamed Eltahan, Karim Moharm, Nour Daoud</i>	
IMPROVING ARABIC DEPENDENCY PARSERS BY USING DEPENDENCY RELATIONS.....	93
<i>Dana Halabi, Arafat Awajan, Ebaa Fayyumi</i>	
AUTOMATED BRAIN TUMOR SEGMENTATION IN MRI USING SUPERPIXEL OVER-SEGMENTATION AND CLASSIFICATION.....	100
<i>Aya Mourad, Ahmed Afifi, Arabi E. Keshk</i>	

A LONG-SHORT-TERM-MEMORY BASED MODEL FOR PREDICTING ATM REPLENISHMENT AMOUNT	108
<i>Muhammad Asad, Muhammad Shahzaib, Yusra Abbasi, Muhammad Rafi</i>	
COVID-19 IMPACT ON E-COMMERCE IN UAE	114
<i>Ahmad Ghandour, Brendon J. Woodford</i>	
PERFORMANCE ANALYSIS OF LANE DETECTION ALGORITHM USING PARTIAL HOUGH TRANSFORM	122
<i>P. Maya, C. Tharini</i>	
A DEEP CNN APPROACH FOR PLANT DISEASE DETECTION	126
<i>Fatma Marzougui, Mohamed Elleuch, Monji Kherallah</i>	
ELECTRONIC STETHOSCOPE FOR DETECTING HEART ABNORMALITIES IN ATHLETES	132
<i>Batyrkhan Omarov, Aidar Batyrbekov, Azizah Suliman, Bakhytzhan Omarov, Yerlan Sabdenbekov, Serik Aknazarov</i>	
ON DETECTING ONLINE RADICALIZATION AND EXTREMISM USING NATURAL LANGUAGE PROCESSING.....	137
<i>Shynar Mussiraliyeva, Milana Bolatbek, Batyrkhan Omarov, Zhanar Medetbek, Gulshat Baispay, Ruslan Ospanov</i>	
PRACTICE OF APPLIED EDGE ANALYTICS IN INTELLIGENT LEARNING FRAMEWORK	142
<i>Kayal Padmanandam, Lakshmi Lingutla</i>	
COLLABORATIVE TEAM CONSTRUCTION IN OPEN MULTI-AGENTS SYSTEM.....	150
<i>Zina Houhamdi, Belkacem Athamena</i>	
A NEW HYBRID SHAPE MOMENT INVARIANT TECHNIQUES FOR FACE IDENTIFICATION IN THERMAL AND VISIBLE VISIONS	157
<i>Shaymaa M. Hamandi, Abdul Monem S. Rahma, Rehab F. Hassan</i>	
AN EMBEDDED SYSTEM FOR IDENTIFYING MEMORY SYSTEMS AND MENTAL IMAGE SCHEMAS AFTER THE INTELLECTUAL STYLE INVENTORY	166
<i>Mai Saleh, Osama El-Sharkawy</i>	
MACHINE LEARNING AND SOFT ROBOTICS	170
<i>Nada Masood Mirza</i>	
A NEW APPROACH IN ISLAMIC LEARNING: PERFORMANCE EVALUATION OF MOTION RECOGNITION SYSTEM FOR SALAT MOVEMENT	175
<i>Nor Azrini Jaafar, Nor Azman Ismail, Yusman Azimi Yusoff</i>	
HYBRID SMS SPAM FILTERING SYSTEM USING MACHINE LEARNING TECHNIQUES	181
<i>Hind Baaqeel, Rachid Zagrouba</i>	
AN IOT BASED HEALTHCARE USING ECG	189
<i>Rami Hodrob, Mahmoud Obaid, Abdulsalam Mansour Abdulsalam Mansour, Ali Sawahreh, Mokhles Naghnagheah, Shatha Sail Abushanab</i>	
ALGERIAN DIALECT SENTIMENT ANALYSIS: STATE OF ART	193
<i>Salima Brachemi-Meftah, Fatiha Barigou</i>	

ANDROID RANSOMWARE DETECTION USING MACHINE LEARNING TECHNIQUES: A COMPARATIVE ANALYSIS ON GPU AND CPU.....	200
<i>Shweta Sharma, C. Rama Krishna, Rakesh Kumar</i>	
TRANSFER LEARNING TO IMPROVE ARABIC HANDWRITING TEXT RECOGNITION	206
<i>Zouhaira Noubigh, Anis Mezghani, Monji Kherallah</i>	
INTERNET OF VEHICLES (IOV): A SURVEY OF CHALLENGES AND SOLUTIONS	212
<i>Jawaher Abdulwahab Fadhil, Qusay Idrees Sarhan</i>	
STUDENTS' PERCEPTION OF ONLINE ASSESSMENT DURING THE COVID-19 PANDEMIC: THE CASE OF UNDERGRADUATE STUDENTS IN THE UAE	222
<i>Elham T. Hussain, Sumya Daoud, Hussam Alrabaiah, Amjad K. Owais</i>	
A SECURE AND EFFICIENT ANONYMOUS CERTIFICATELESS SIGNCRYPTION FOR KEY DISTRIBUTION SCHEME FOR SMART GRID.....	228
<i>Jennifer Batamuliza, Damien Hanyurwimfura</i>	
DNA SEQUENCE ERROR CORRECTIONS BASED ON TENSORFLOW	235
<i>Hassanin M. Al-Barhamtoshy, Rania Ahmed Younis</i>	
A MULTI AGENT BROKER FRAMEWORK AND DECISION SUPPORT FOR ENHANCED CLOUD COMPUTING DISCOVERY	240
<i>Mohamed Galal Hafez Rady, Mohamed Shaheen Elgamel, Osama Mohamed Badawy</i>	
VISUAL STEGANOGRAPHY AND ENCRYPTION TACHNIQUES WITH HARDWARE IMPLEMENTATION	247
<i>Hare Ram Sah, Hemang Shrivastava, Manoj Ramaiya</i>	
A COMPARATIVE ANALYSIS OF MACHINE LEARNING TECHNIQUES FOR CLASSIFICATION AND DETECTION OF MALWARE	254
<i>Maryam Al-Janabi, Ahmad Mousa Altamimi</i>	
LEARNING THE STRUCTURE OF THE TREE AND TREE AUGMENTED NAIVE BAYESIAN FROM INCOMPLETE AND IMBALANCED DATA	263
<i>Issam Salman</i>	
SECURITY ISSUES IN IPV6 OVER LOW-POWER WIRELESS PERSONAL AREA NETWORKS (6LOWPAN): A REVIEW.....	270
<i>Samson Otieno Ooko, Jamila Kadam'Manja, Marie Grace Uwizeye, Dagmawi Lemma</i>	
VIRTUAL REALITY APPLICATIONS IN EDUCATION DOMAIN.....	275
<i>Ghaliya Alfarsi, Azmi Bin Mohd Yusof</i>	
CLOUD COMPUTING FAILURES, RECOVERY APPROACHES AND MANAGEMENT TOOLS	282
<i>Lara Saleh, Waleed Al-Sitt</i>	
TRUST AND REPUTATION IN WIRELESS SENSORS NETWORKS.....	292
<i>Lara Saleh, Anas Abu Taleb, Walid A. Salameh</i>	
A STRUCTURED APPROACH TOWARDS ROBUST DATABASE COLLECTION FOR LANGUAGE IDENTIFICATION	298
<i>Deepti Deshwal, Pardeep Sangwan, Divya Kumar</i>	

EVALUATION OF CLASS DECOMPOSITION BASED ON CLUSTERING VALIDITY AND K-MEANS ALGORITHM.....	304
<i>Bilal Sowan, Nasim Matar, Firas Omar, Mohammad Alauthman, Mohammed Eshtay</i>	
SOCIAL-AWARE WEB API RECOMMENDATION IN IOT	310
<i>Marwa Meissa, Saber Benharzallah, Laid Kahloul, Okba Kazar</i>	
RECOVERY OF MOBILE GAME DESIGN PATTERNS.....	315
<i>Maria Khan, Ghulam Rasool</i>	
COMPARISON STUDY BETWEEN CONVENTIONAL MACHINE LEARNING AND DISTRIBUTED MULTI-TASK LEARNING MODELS	322
<i>Salam Hamdan, Sufyan Almajali, Moussa Ayyash</i>	
MINING PATIENTS' REVIEWS IN ONLINE HEALTH COMMUNITIES FOR ADVERSE DRUG REACTION DETECTION OF ANTIEPILEPTIC DRUGS	327
<i>Anwar Ali Yahya, Yousef Asiri, Ibrahim Alyami</i>	
OPTIMIZATION OF MIGRATION COST FOR NETWORK FUNCTION VIRTUALIZATION REPLACEMENT	333
<i>Fadia Shoura, Ammar Gharaibeh, Sahel Alouneh</i>	
INVESTIGATING THE LACK OF UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN SAUDI SCHOOLS.....	340
<i>Nouf Aljuhani, Elaaf Aljohani, Raghad Alharbi, Rasha Almutairi, Maram Meccawy</i>	
A GENETIC ALGORITHM-BASED XML INFORMATION RETRIEVAL MODEL	347
<i>Fatma Zohra Bessai-Mechmache, Karima Hammouche, Zaia Alimazighi</i>	
SENTIMENT ANALYSIS AND CLASSIFICATION OF RESTAURANT REVIEWS USING MACHINE LEARNING	352
<i>Kanwal Zahoor, Narmeen Zakaria Bawany, Soomaiya Hamid</i>	
A WEBGIS DECISION SUPPORT SYSTEM FOR WADI EL NATRUN RURAL LAND MANAGEMENT	358
<i>Sayed Ahmed, Ahmed Kotb, Ehab Samir, Marwa Moustafa, Eslam Farg, Ahmed Abd Elhay, Sayed M. Arafat</i>	
STUDYING AND ANALYZING THE FOG-BASED INTERNET OF ROBOTIC THINGS	365
<i>Noha El Menbawy, Hesham Arafat, Mohamed Saraya, Amr M. T. Ali-Eldin</i>	
TOWARDS A HYBRID DATA PARTITIONING TECHNIQUE FOR SECURE DATA OUTSOURCING	373
<i>Sultan Badran, Nabil Arman, Mousa Farajallah</i>	
OPTIMIZING THE ENERGY CONSUMPTION LEVEL IN LORAWAN NETWORKS	382
<i>Ala' Khalifeh, Khaled Aldahdouh, Sahel Alouneh</i>	
QOS-AWARE SERVICE COMPOSITION IN FOG-IOT COMPUTING USING MULTI-POPULATION GENETIC ALGORITHM	388
<i>Idir Aoudia, Laid Kahloul, Saber Benharzallah, Okba Kazar</i>	
REAL TIME PEDESTRIAN DETECTION USING ROBUST ENHANCED YOLOV3+	397
<i>Chintakindi Balaram Murthy, Mohammad Farukh Hashmi</i>	

HOUSE PRICE PREDICTION USING MACHINE LEARNING ALGORITHM - THE CASE OF KARACHI CITY, PAKISTAN.....	402
<i>Maida Ahtesham, Narmeen Zakaria Bawany, Kiran Fatima</i>	
HUMAN GAIT IDENTIFICATION SYSTEM BASED ON TRANSFER LEARNING.....	407
<i>Layla Hashem, Roaa Al-Harakeh, Ali Cherry</i>	
APPLICABLE STRATEGY TO CHOOSE AND DEPLOY A MOOC PLATFORM WITH MULTILINGUAL AQG FEATURE	413
<i>Younes-Aziz Bachiri, Hicham Mouncif</i>	
A NOVEL METHOD TO VERIFY THE SEARCH RESULTS OF DATABASE QUERIES ON CLOUD COMPUTING.....	419
<i>Safaa Hraiz, Ghazi Al-Naymat, Arafat Awajan</i>	
WIRELESS SENSOR NETWORK MAC ENERGY - EFFICIENCY PROTOCOLS: A SURVEY	426
<i>Ghassan Samara</i>	
ARABIC HANDWRITING RECOGNITION: BETWEEN HANDCRAFTED METHODS AND DEEP LEARNING TECHNIQUES.....	431
<i>Aicha Korichi, Sihem Slatnia, Oussama Aiadi, Najiba Tagougui, Monji Kherallah</i>	
DIABETES DISEASE PREDICTION USING ARTIFICIAL INTELLIGENCE	437
<i>Muntather Ayad, Hussein Kanaan, Mohammad Ayache</i>	
COMPARISON OF TREE BASED CLASSIFICATIONS AND NEURAL NETWORK BASED CLASSIFICATION.....	443
<i>B. Sarada, Madhavi Dandu, Saikonda Krishna Tarun</i>	
A SEQ2SEQ NEURAL NETWORK BASED CONVERSATIONAL AGENT FOR GULF ARABIC DIALECT	446
<i>Tahani Alshareef, Muazzam Ahmed Siddiqui</i>	
ARABIC READING COMPREHENSION BENCHMARKS CREATED SEMIAUTOMATICALLY	453
<i>Mariam Biltawi, Arafat Awajan, Sara Tedmori</i>	
MOOC'S STUDENT RESULTS CLASSIFICATION BY COMPARING PNN AND OTHER CLASSIFIERS WITH FEATURES SELECTION	459
<i>Ahmed Mahmoud Nazif, Ahmed Ahmed Hesham Sedky, Osama Mohamed Badawy</i>	
SENSE INVENTORIES FOR ARABIC TEXTS	468
<i>Marwah Alian, Arafat Awajan</i>	
A DISTRIBUTED FAULT TOLERANCE MECHANISM FOR AN IOT HEALTHCARE SYSTEM	472
<i>Meriem Zaiter, Salima Hacini</i>	
MANAGING MORAL HAZARD IMPACT IN DECISION MAKING PROCESS.....	478
<i>Belkacem Athamena, Zina Houhamdi, Ghaleb A. El Refae</i>	
MODIFIED FUZZY C-MEANS CLUSTERING APPROACH TO SOLVE THE CAPACITATED VEHICLE ROUTING PROBLEM	483
<i>Mohamed A. Wahby Shalaby, Ayman R. Mohammed, Sally Kassem</i>	

ACCESSNET: A THREE LAYERED VISUAL BASED ACCESS AUTHENTICATION SYSTEM FOR RESTRICTED ZONES.....	490
<i>Md. Farukh Hashmi, Kiran Kumar Ashish, Satyarth Katiyar, Avinash G. Keskar</i>	
FUZZY LOGIC APPLIED TO SMART BABY'S HEALTH AND FEEDING SEQUENCE MONITORING SYSTEM.....	497
<i>Tuyisenge Jean Claude, Nirere Gaudence, Mukanyiligira Didacienne, Nyakuri Jean Pierre</i>	
MODIFIED CLUSTERING ALGORITHMS FOR ENERGY HARVESTING WIRELESS SENSOR NETWORKS- A SURVEY	504
<i>Deivanai Gurusamy, Sadik Abas</i>	
AN ANALYTICAL STUDY OF STUDENT SATISFACTION WITH THE STATISTICS COURSES IN E-LEARNING AS A NEW EXPERIENCE AFTER COVID-19 AT AL AIN UNIVERSITY	515
<i>Maha Rahrrouh, Mamdouh Ghanem</i>	
BUILDING AN INTELLIGENT TELEMONITORING SYSTEM FOR HEART FAILURE: THE USE OF THE INTERNET OF THINGS, BIG DATA, AND MACHINE LEARNING	521
<i>Shorouq Eletter, Tahira Yasmin, Ghaleb Elrefae, Hashem Aliter, Abdullah Elrefae</i>	

Author Index