

2022 International Conference on Emerging Trends in Computing and Engineering Applications (ETCEA 2022)

**Karak, Jordan
23-25 November 2022**



**IEEE Catalog Number: CFP22DB7-POD
ISBN: 978-1-6654-7710-9**

**Copyright © 2022 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:	CFP22DB7-POD
ISBN (Print-On-Demand):	978-1-6654-7710-9
ISBN (Online):	978-1-6654-7709-3

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

Track 1: Artificial Intelligence

Recognizing Cells in Histological Images of Fish Gonads	1
<i>Almoutaz Mbaidin, Eva Cernadas, Zakaria Al-Tarawneh, Manuel Fernandez-Delgado</i>	
Performance Comparison of Word2Vec Models for Detecting Arabic Hate Speech on Social Networks	7
<i>Samar Al-Saqa, Arafat Awajan, Bassam Hammo</i>	
Human-Cyber-Physical Disassembly Workstation 5.0 for Sustainable Manufacturing	12
<i>Najat Almasarwah, Esraa Abdelall, Mohammad Saraireh, Saleem Ramadan</i>	
Classification of Fundus Images Captured using D-Eye Smartphone Retinal Imaging System	17
<i>Seetha Maddala, Kalyani Nara, Sravani Devi Yerrarapu, Shubhasri Vanam</i>	
Off-Shelf Deep Learning Architectures as Feature Extractor in CT COVID-19 Classification	24
<i>Haythem El-Messiry</i>	
The Solar Energy Forecasting using LSTM Deep Learning Technique	28
<i>Tamer Musha'l Al-Jaafreh, Abdullah Al-Odienat, Yousef A. Altaharwah</i>	
A Method for Measuring the Weight of Human Body Segments Based on 3D-Printed Body Segments	34
<i>Matil Haddad, Fatima Alamoush, Razan Khatatbeh, Hala Sabaneh, Willa Alzu'bi, Esraa Abdelall</i>	
Risk Assessment, Biomechanical Analysis of Sewing Machine Operators using CATIA Software	38
<i>Rahaf Abed Alrahman, Jenan Hamdan, Diya Alawneh, Mohammed Shehab, Obadeh Hasan</i>	
Hyperparameters Optimization of Convolutional Neural Networks using Evolutionary Algorithms	43
<i>Abeer Al-Hyari, Mua'ad Abu-Faraj</i>	
A Hybrid Approach for Auto-Correcting Grammatical Errors Generated by Non-Native Arabic Speakers.....	49
<i>Zainab Althafir, Rawan Ghnemat</i>	
A Comparison of the Application of Artificial Intelligence in the Educational System.....	55
<i>Mosa. Rabeya, Md. Shihab Mahmud, Sayada Fatima Tuj Johora, Abdus Sattar</i>	
A Rapid Evidence Assessment of Health Information System in Jordan.....	61
<i>Ahmad H. Alnawafleh, Hoda Rashad</i>	
Autonomous Vehicle, its Adoption: Challenges, Opportunities, Future Implications	66
<i>Mohammed Ahmed, Rahat Iqbal, Saad Amin, Obada Alhabshneh, Abubakar Garba</i>	
Track 2: Cyber Security	
Unknown Attack Detection Based on Multistage One-Class SVM	72
<i>Ashaar Alkhamaiseh, Mouhammd Alkasassbeh, Jaafer Al-Saraireh</i>	

A CNN, Image-Based Approach for Malware Analysis	81
<i>Aya Migdady, Lara Smadi, Qussai Yaseen</i>	
Security Framework for Hosting Systems on the Cloud: Case Study of Jordan E-Government Websites	87
<i>Asma Salem, Rizik Al-Sayyed</i>	
VANET Intrusion Investigation Based Forensics Technology: A New Framework	93
<i>Mohammad Y. Al Khanafseh, Ola M. Surakhi</i>	
Review of Security Challenges in Mobile Cloud Computing Applications	100
<i>Majd Alqarqaz, Maram Bani Younes</i>	
Track 3: Networking	
Network Propagation Loss Models: Effects, Classification	106
<i>Alaa Btoush, Aya Tareef, Anas Ali Alkasasbeh</i>	
Comparison, Classification of VANET Routing Protocols	112
<i>Aya Tareef, Alaa Btoush, Obada Alhabashneh</i>	
A Dual-Frequency Single-Slot Substrate Integrated Waveguide Antenna for 5G Millimeter Applications	118
<i>Amjaad T. Altakhaineh, Saqer S. Alja'afreh</i>	
Analysis of RSS Patterns to Detect Rogue Access Points	121
<i>Roa Maayah, Ahmad Abadleh, Eslam Al-Subehat</i>	
Energy Efficiency Wireless Sensor Networks Protocols: A Survey	126
<i>Ghassan Samara, Ammar Almomani, Mohammad Alauthman, Mouhammad Alkasasbeh</i>	
Track 4: Software Engineering	
Recognizing Speech Emotions in Iraqi Dialect using Machine Learning Techniques	132
<i>Ghussou Ali, Ahmad B. Hassanat, Ahmad S. Tarawneh</i>	
SRP-Blockchain: A Framework for Scientific Research Profile on the Blockchain	137
<i>Amjad Aldweesh, Huda Alatwi, Mohammad Alauthman, Mouhammad Alkasasbeh</i>	
Hybrid Software Process Model: V-SCRUM	143
<i>Tasneem Mustafa Ghnaimat, Amjad Hudaib</i>	
Research Trends in Agile Software Development	149
<i>Gül Tokdemir, Sezer Uğuz</i>	
A Proposed Model for Eliminating Nonfunctional Requirements in Agile Methods using Natural Language Processes	154
<i>Ayat Mashal Almanaseer, Wael Alzyadat, Mohammad Muhairat, Suleyman Al-Showarah, Aysh Alhroob</i>	
Track 5: Internet of Things	
A New Secure Architecture for the Access Control of Resources in IoT Networks	161
<i>Sami Mnasri</i>	

Modelling, Implementing an Energy-Optimised IoT Architecture for Smart Homes	167
<i>Mansoor Alghamdi</i>	
Evaluation of Multi-Armed Bandit-Based Online Machine Learning Model Selection for Service Time Prediction in Vehicular Edge Computing	173
<i>Mutaz A. B. Al-Tarawneh, Ashraf Alkhresheh</i>	
Integrated Multi-Criteria Decision Making Approach for Service Brokering in Cloud-Enabled IoT Environments.....	180
<i>Ayah Reda Alhalameh, Mutaz A. B. Al-Tarawneh</i>	
E-Food: Success Factors for Establishing Online Food Retailing: A Case Study from Jordan.....	185
<i>Hamza Khlefat, Homam Attar, Abdallah Qusef</i>	
Cloud-Based Diabetic Prediction Framework: Deep Learning Approach.....	191
<i>Monther Tarawneh, Fiasal Al Zyoud, Yousef AlSharrab, Khalaf khatatneh</i>	
Context-Aware Framework for Enhanced Smart Urban Pollution Monitoring, Control	197
<i>Omar Tayan</i>	
Track 6: Data Science	
Business Intelligence System for Human Resource Management System.....	202
<i>Salam Fraihat, Haneen Innab, Sharif Naser Makhadmeh, Mohammed Azmi Al-Betar</i>	
Big Data Analytics, Healthcare Performance: A Unified Model of Competencies.....	208
<i>Hamzah Alkhazaleh, Mohammad Daradkeh</i>	
Design, Implementation of Business Intelligence Framework for a Global Online Retail Business.....	213
<i>Razan Al-Omouh, Salam Fraihat, Ghazi Al-Naymat, Mohammed Awad</i>	
An Interactive Dashboard for Predicting Bank Customer Attrition.....	219
<i>Lamees Mohammad Dalbah, Sharaz Ali, Ghazi Al-Naymat</i>	
An Empirical Study of the Influence of XBRL Adoption on Information Asymmetry: Evidence from Jordan	225
<i>Ghada A. Altarawneh, Nawaf Thuneibat, Ahmad Tarawneh</i>	
Business Intelligence Solution for Covid-19 Pandemic.....	230
<i>Mozah Al Dhanhani, Sharif Naser Makhadmeh, Mohammed Azmi Al-Betar</i>	
The Impact of Feature Selection on the Regression Task for Life Expectancy Prediction	236
<i>Mariam M. Biltawi, Raneem Qaddoura</i>	
A Machine Learning Approach for Diagnosing, Identifying Symptoms of COVID-19	241
<i>Ahmed Bani Mustafa, Olla Bulkrock, Jamal Al Qundus</i>	
Applications Review of Hassanat Distance Metric.....	247
<i>Ahmad Hassanat, Esra'a Alkafaween, Ahmad S. Tarawneh, Samir Elmougy</i>	
Author Index	253