

2024 17th International Conference on Development in eSystem Engineering (DeSE 2024)

**Khorfakkan, United Arab Emirates
6-8 November 2024**



**IEEE Catalog Number: CFP2456I-POD
ISBN: 979-8-3503-6870-3**

**Copyright © 2024 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:	CFP2456I-POD
ISBN (Print-On-Demand):	979-8-3503-6870-3
ISBN (Online):	979-8-3503-6869-7

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

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Intrusion Detection in OT/SCADA Cyber Security and Tabular Generative Adversarial Networks.....	1
<i>Hillol Biswas, Muthyala Manoj Kumar, Pawan Kumar</i>	
Assessing AI-Powered Personal Assistant Siri: A Risk Analysis Using ISO/IEC 27005	7
<i>L. Abugokh, M. Hasheer, H. Ismail, G. B. Satrya</i>	
Design of a Mechatronic Endoskeleton Robot for Inspection Tasks: Model Reference Adaptive Control (MRAC) for Serpentine Locomotion with Stability Analysis	13
<i>Ammar K. Al Mhdawi, Nick Wright, Mohammed I. Younis, Amjad J. Humaidi</i>	
Crack Width Detection for Concrete Structures Using Thermal Images and Artificial Neural Network	19
<i>Anwar Hamdan, Ahmed Bingamil, Sadeque Hamdan, Tiago Gualdrapa Soares, Saleh Abu Dabous, Imad Alsyouf, Fatma Hosny</i>	
Smart Office System: A Review	25
<i>Aseel Habeeb Gatea, Alaa Al-Ibadi, Musaab Adil Ali</i>	
Speech Enhancement: A Review of Various Approaches, Trends, and Challenges	31
<i>Basheera M. Mahmmod, Sadiq H. Abdulhussain, Taghreed Mohammed Ali, Muntadher Alsabah, Abir Hussain, Dhiya Al-Jumeily</i>	
Effective Noise Reduction in Biomedical Speech Signals: A Case Study on Parkinson's Disease	37
<i>Khawla Ahmed Salem Al-Tayeb, Hagar Elbatanouny, Abir Hussain</i>	
Speech Enhancement Algorithm Using Deep Learning and Hahn Polynomials	42
<i>Ammar S. Al-Zubaidi, Riyadh Bassil Abduljabbar, Basheera M Mahmmod, Sadiq H. Abdulhussain, Marwah A. Naser, Muntadher Alsabah, Abir Hussain, Dhiya Al-Jumeily</i>	
Improving Cardiovascular Prediction Performance Using Machine Learning Based Feature Selection	48
<i>Marwah Abdulrazzaq Naser, Muntadher Alsabah, Sadiq H. Abdulhussain, Basheera M Mahmmod, Abir Hussain, Dhiya Al-Jumeily</i>	
A Cross-Modal Aware Scalable Approach for Fake News Detection	54
<i>Nalinika Liyanage, Diyan Muhammad, Shatha Ghareeb, Jamila Mustafina</i>	
Computer Vision-Driven AI Techniques for Classification of Animal Species	60
<i>Anthony Thomas Bacon, Abbas Saad Alatrany, Luke Topham, Hoshang Kolivand, Iftikhar Khan, Abir Hussain, Wasiq Khan</i>	
Artificial Intelligence and Its Role in Optimizing Inventory Management: A Simulation Study	66
<i>Cian Dafydd Roberts, Abbas Saad Alatrany, Mahmood Alsaadi, Hoshang Kolivand, Omar Aldhaibani</i>	
Drowsiness Detection System Using Mobile Application Development	72
<i>Mirza Mubashir Baig, Shatha Ghareeb, Muhammad Diyan, Jamila Mustafina</i>	
Online Job Search Application with Automatic Recommendation and Notification System: Leveraging AI and ML for Enhanced User Experience.....	78
<i>Ebenezer Babalola, Shatha Ghareeb, Jamila Mustafina</i>	

Agri Sage: A Mobile Application for Agricultural Disease Detection, E-Commerce, and Real-Time Information Systems.....	84
<i>Talha Aslam, Shatha Ghareeb, Jamila Mustafina</i>	
Prediction of Asthma Attacks Using ANFIS and Mobile Technologies	89
<i>Aynoor Al-Turk, Kasim M. Al-Aubidy, Mustafa A. Al-Khawaldeh</i>	
Efficient Solution for Exam Timetabling Problem: A Case Study of the University of Sharjah	101
<i>Israa Lulu, Hind Alowais, Ayad Turkey, Saad Harous, Abir Hussain</i>	
Lightweight Hybrid Model Combining MobilNetV2 and PCA for Copy-Move Forgery Detection.....	107
<i>Issam Shallal, Lamia Rzunga Haddada, Najoua Essoukri Ben Amara</i>	
Enhanced Detection of Copy-Move Forgery by Fusing Scores from Handcrafted and Deep Learning-Based Detection Systems.....	113
<i>Issam Shallal, Lamia Rzunga Haddada, Najoua Essoukri Ben Amara</i>	
ANFIS Based Mathematical Model of Mechanical Ventilator	119
<i>Mustafa A. Al-Khawaldeh</i>	
Leveraging Memetic Algorithm and Machine Learning Methods for Email-Based Spam Detection	123
<i>Mariam Khalid Al-Ali, Manal Ali Alteneiji, Ibrahim Abaker Hashem, Omar Salah F. Shareef, Abir Hussain, Ayad Turkey</i>	
Transformer-Less Grid Voltage Controller Through SCR Switches and a Flexible Pulse Device	129
<i>Hussain Attia, Mohammad Rabih Aziz, Omar Alzeyoudi</i>	
Advanced Techniques in Channel Estimation, Precoding, and Detection for Massive MIMO Systems in 5G and Beyond.....	135
<i>Khawla A. Alnajjar, Sam Ansari, Abdulla Alhammadi, Ali Almahal, Fahim Rahman, Abdulla Alsuwaidi, Khalifa Alzarooni, Soliman Mahmoud, Abir Hussain</i>	
Pioneering MIMO Technologies: Enabling the Next Generation of 5G Networks and Beyond	141
<i>Khawla A. Alnajjar, Sam Ansari, Yousuf Alhmoudi, Rashid Ibrahim, Ahmed Alblooshi, Yousif Bohamad, Soliman Mahmoud, Abir Hussain</i>	
Enhancing Wildlife Protection: Poacher Detection Using Machine Learning Models.....	147
<i>Omar Mohamed Gad, Hagar Elbatanouny, Eqab Almajali, Jawad Yousaf, Abir Hussain</i>	
Towards Efficient Diabetic Retinopathy Diagnosis: A Comparative Study of Classification Techniques.....	152
<i>Khawla Ahmed Al-Tayeb, Anwar Jarndal, Talal Bonny, Sohaib Majzoub, Eqab Almajali, Soliman Awad Mahmoud</i>	
Effects of Hybrid Contrast Enhancement and Bilateral Filtering for Enhancing Ultrasound Thyroid Cancer Images Classification	157
<i>Leena R David, Dalal Yousef Omar Alnakhalah, Safa Zeinal Dastras, Abdulmunhem Obaideen, Zubaida Said Ameen, Sareh Khalvati, Reem Hassan Mohamed Saleh Alobeidli, Dilber Uzun Ozsahin, Taha Fouad, Wesam Ali Hidar, Mohit Pandey, Aisha Alshuweih, Auwalu Saleh Mubarak</i>	
Intelligent Sustainable Robot for Efficient Marine Environment Monitoring Using Li-Fi Technology	162
<i>Bara' Fteiha, Hala Samer, Fatima Almazrouei, Shouq Mohamed, Sultanah Al-Zubaidi, Fahid Riaz, Eqab Almajali, Abir Jafar Hussain, Jawad Yousaf</i>	

A Review of Screening Heart and Lung Diseases Using Auscultation and Artificial Intelligence.....	168
<i>Samah Osama, Leqaa Salah, Gena Dahi, Mohammed Ghazal, Eqab Almajali, Abir Jaafar Hussain, Jawad Yousaf, Taimur Hassan</i>	
Network-Based Multi-Protocol Attack Detection in Internet-Of-Medical-Things Using Explainable Machine Learning.....	174
<i>Mohammed M. Alani</i>	
Quantum Radar: Overview on Technology, Limitations and Opportunities.....	180
<i>Mariam Alalili, Mohammed Bin Ali, Qassim Nasir, Manar Abu Talib</i>	
Covid-19 Classification Using Cough Audio - A Comparison of Deep Learning Vs Traditional ML Algorithms.....	187
<i>Sowndarya Venkateswaran, Nailya Sultanova</i>	
Identity-Preserved Facial Diversity with Gans and Recognition Via Fewshot Approach	193
<i>Swarnava Bhattacharjee, Nailya Sultanova</i>	
Design and Development of “Smart Metre Reading” and Monitoring System from Digital Metre Dataset.....	199
<i>Jang Bahadur Singh Umath, Nailya Sultanova</i>	
Evaluating Handheld Spectroscopic Techniques and Machine Learning Algorithms	205
<i>Jade Bradbury, Thomas Coombs, Dhiya Al-Jumeily Obe, Jason Birkertt, Sulaf Assi</i>	
Impact of Outliers on Regression and Classification Models: An Empirical Analysis.....	211
<i>Sam Ansari, Ali Bou Nassif, Soliman Mahmoud, Sohaib Majzoub, Eqab Almajali, Anwar Jarndal, Talal Bonny, Khawla A. Alnajjar, Abir Hussain</i>	
Utilising Artificial Intelligence to Augment Physiotherapy Education: A Video-Based Analysis and Grading System for Evaluating Student Therapists’ Performance	219
<i>Victor Umesiobi, Hiba Alsmadi, Victor Hammond, Gok Kandasamy, Ala S. Al Kafri</i>	
Android Forensics Analysis: Is it Incognito?.....	225
<i>I. B. Mnaouer, A. Samsudeen, M. Sherif, A. Alreyashi, A. Bashar, G. B. Satrya</i>	
Early Stage Kidney Chronic Diseases Diagnosis Using Feature Fusion and Deep Learning Algorithms.....	230
<i>Tanzila Saba, Muhamamd Mujahid, Noor Ayesha, Mahyar Kolivand</i>	
Enhancing Freezing of Gait Prediction in Parkinson’s Disease Using Machine Learning and Explainable AI.....	236
<i>Hagar Elbatanouny, Natasa Kleanthous, Suhaib Salah, Soliman Mahmoud, Abir Hussain</i>	
Enhancing Machine Learning-Based Model for Early Detection of Diabetes	242
<i>Njideka Linda Dike, Shatha Ghareeb, Jamila Mustafina Kazan</i>	
Advancements in AI: A Study of English-To-Urdu Dubbing Methods and Applications.....	249
<i>Mariam Arshad, Shatha Ghareeb, Jamila Mustafina</i>	
A LoRa-Based Communication System for Real-Time Location Tracking and Emergency Signaling in Military Simulation Exercises	255
<i>Ben Hamilton, Omar A Aldhaiban, Martin Randles, Ian Fitzpatrick</i>	
Assisting Airport Security Screening Through YOLO Techniques and Generating Results Using LIME Interpretation.....	261
<i>Ruchen Liu, Shatha Ghareeb, Jamila Mustafina</i>	

Automated Detection and Classification of Brain Tumors from MRI Images	268
<i>Jose Ankitha, Shatha Ghareeb, Diyan Muhammad, Jamila Mustafina</i>	
A Novel Technique of Android Stealth Rooting	275
<i>Bilal Ahmed Kamal, Abdul Basit Shahid, Syed Muhammad Sajjad, Kashif Kifayat, Khwaja Mansoor Ul Hassan</i>	
Reducing Bandwidth and Storage Requirements for Surveillance Videos Using ROI Extraction and Compression	281
<i>Maryam H. Fadel, Ahlam H. Shanin Al-Sudani, Sadiq H. Abdulhussain, Basheera M. Mahmmod, Muntadher Alsabah, Abir Hussain, Dhiya Al-Jumeily</i>	
Artificial Intelligence as a Tool for the Regeneration of Historic City Centers	287
<i>Amani Kamal Mustafa, Venus Suleiman Akef</i>	
Using Intelligent Solutions to Improve Logistics Processes	293
<i>Irina Makarova, Aleksey Boyko, Vadim Mavrin, Jamila Mustafina</i>	
Cryptography Role in Industry 4.0 Through Privacy of Data and Communications Using Hybrid Encryption Algorithms	299
<i>Mohammed Najm Abdulredha, Musadaq A. Hadi, Mustafa M. Barakat, Ali Hussein Hamdullah</i>	
Identification of Cosmetics Using Near-Infrared Spectroscopy	305
<i>Jordan Thomas, Sarah Rowlands, Dhiya Al-Jumeily Obe, Tilak Ginige, Sulaf Assi</i>	
Improving E-Commerce with Intelligent Solutions	310
<i>Irina Makarova, Aleksey Boyko, Jamila Mustafina</i>	
Bi-Dimensional Attention-Based SAR Change Detection with SEBlock and MHSA	316
<i>Mohamed Ihmeida, Muhammad Shahzad</i>	
Remote Monitoring of Muscle Activity by Integrating Stacking Ensemble Classifier for Surface Electromyography Signals*	322
<i>Alya Alnuaimi, Hissam Tawfik, Hayssam Dahrouj, Abir Hussain</i>	
Classification of Osteoporosis in Knee X-Ray Using Transfer Learning and Random Forest	328
<i>Wesam Ali Hidar, Auwalu Saleh Mubarak, Leena R David, Abir Jafaar Hyssian, Hissam Mouayad Tawfik, Dilber Uzun Ozsahin</i>	
AI-Enabled Diagnosis of Lumbar Spinal Stenosis from Axial MR Images Using Convolutional Neural Network and Image Explainer	334
<i>Uthman O. Oyebanji, Ala S. Al Kafri, Hiba Alsmadi, Mohammad Alkasasbeh, Wasiq Khan</i>	
Evaluating Few-Shot Prompting Approach Using GPT4 in Comparison to BERT-Variant Language Models in Biomedical Named Entity Recognition	340
<i>Kranthi Kumar Konduru, Friska Natalia, Sud Sudirman, Dhiya Al-Jumeily</i>	
Evaluation of Bone Cancer Treatment Techniques	346
<i>Efe Precious Onakpojeruo, Berna Uzun, Leena R. David, Ilker Ozsahin, Christiana Chioma Efe, Dilber Uzun Ozsahin</i>	
Ensemble Predictive Modeling for Dementia Diagnosis	352
<i>Basil Barth Duwa, Efe Precious Onakpojeruo, Berna Uzun, Abir Jaafar Hussain, Ilker Ozsahin, Leena R. David, Dilber Uzun Ozsahin</i>	

Deep Learning-Based CT-Scan Image Classification for Accurate Detection of Pancreatic Cancer: A Comparative Study of Different Pre-Trained Models.....	358
<i>Natacha Usanase, Dilber Uzun Ozsahin, Leena R. David, Berna Uzun, Abir Jaafar Hussain, Ilker Ozsahin</i>	
Application of Fuzzy PROMETHEE in the Analysis of Childbirth Techniques	364
<i>Natacha Usanase, Berna Uzun, Leena R. David, Dilber Uzun Ozsahin, Ilker Ozsahin</i>	
A Decision-Making Approach in the Clinical Diagnosis and Treatment of Vulva Cancer	370
<i>Natacha Usanase, Berna Uzun, Leena R. David, Dilber Uzun Ozsahin, Ilker Ozsahin</i>	
Using Near-Infrared Spectroscopy and Machine Learning Algorithms for the Detection of Cardiovascular Diseases and Diabetes Mellitus in Fingernails	375
<i>Megan Wilson, Dhiya Al-Jumeily Obe, Ismail Abbas, Iftikhar Khan, Jason Birkett, Matthew Harper, Sulaf Assi</i>	
Enhancing Comorbidity Diagnosis with Adversarial Ensemble Learning	381
<i>Dheyauldeen M. Mukhlif, Dhafar Hamed Abd, Ridha Ejballi, Adel M. Alimi, Mohammed Fadhil Mahdi</i>	
Adversarial Arabic Fake News Detection Based on Machine Learning.....	387
<i>Maysoon Ahmed Abbas, Dhafar Hamed Abd, Mondher Frikha, Adel M. Alimi, Mohammed Fadhil Mahdi</i>	
Enhance Cancer Text Classification Using Multi Word Embedding and Ensemble Learning	393
<i>Mohammed Fadhil Mahdi, Dhafar Hamed Abd, Ahmed Subhi Abdalkafor, Abir Jaafar Hussain</i>	
Leveraging the Novel MSHA Model: A Focus on Adrenocortical Carcinoma.....	399
<i>Mubarak Taiwo Mustapha, Efe Precious Onakpojeruo, Leena R. David, Berna Uzun, Abir Jaafar Hussain, Dilber Uzun Ozsahin</i>	
Adversarial Ensemble Learning for Mortality Prediction in Intensive Care Units.....	405
<i>Kareem Hameed Khalaf, A. Moallemi Khiavi, Dhafar Hamed Abd</i>	
Selection Techniques in Genetic Algorithm	411
<i>Efe Precious Onakpojeruo, Berna Uzun, Leena R. David, Ilker Ozsahin, Dilber Uzun Ozsahin</i>	
Hybridized Paradigms for the Clinical Prediction of Lung Cancer.....	417
<i>Natacha Usanase, A. G. Usman, Dilber Uzun Ozsahin, Leena R. David, Ilker Ozsahin, Berna Uzun, Abir Jaafar Hussain</i>	
Global Life Expectancy Prediction Using Machine Learning Ensemble Techniques	423
<i>Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Leena R. David, Abir Jaafar Hussain, Berna Uzun, Ilker Ozsahin</i>	
Machine Learning-Based Predictive Modeling of Mental Health Comorbidities	428
<i>Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Leena R. David, Abir Jaafar Hussain, Berna Uzun, Ilker Ozsahin</i>	
Evaluating ELISA for Prostate Cancer Detection: A Hybrid PROMETHEE-TOPSIS Approach Using Prostate-Specific Antigen Levels	433
<i>Dilber Uzun Ozsahin, Declan Ikechukwu Emegano, Leena R. David, Berna Uzun, Ilker Ozsahin</i>	

Heart Attack Prediction by Integrating Independent Component Analysis with Machine Learning Classifiers	439
<i>Abbas Khalifa Nawar, Sabah Abdulazeez Jebur, Hasan Abdulrazzaq Jawad, Mothefer Majeed Jahefer, Lafta Alkhazraji, Abir Jaafar Hussain</i>	
Integrating ANFIS, ANN, & MLR with MCDM for Accurate Prediction of Lung Cancer for Improved Clinical Decision Support	445
<i>Efe Precious Onakpojeruo, Berna Uzun, Leena R. David, Ilker Ozsahin, Christiana Chioma Efe, Dilber Uzun Ozsahin</i>	
Enhancing ICD-9 Code Prediction with BERT: A Multi-Label Classification Approach Using MIMIC-III Clinical Data	451
<i>Irshad A Buchh</i>	
Taxonomy and Accurate Survey of Fake Face Recognition System in E-Learning Platforms.....	456
<i>Bilal Abdulsatar Fadel, Ahmed Subhi Abdalkafor</i>	
Design and Analysis of Synchronous and Asynchronous Buck Converters in Electrical Applications.....	462
<i>Mustafa Mohammed Kareem, Farhan Abed Harbi, Alhasan Basheer Ibrahim, Ahmed Shakir Al-Hiti, Yousif Al Mashhadany</i>	
Real-Time Services Robot with an Intelligent System Based on a Radio Frequency Identification Unit.....	468
<i>Yousif Al Mashhadany, Mohanad A. Al-Askari, Abdullah Al-Ani, Taisir Ahmed Yaseen Dawod Alani, Sameer Algburi</i>	
Aug-Viz: An Augmented Reality Based Tool to Visualize Human Skeleton for Medical Students of Bangladesh	474
<i>Towfik Ahmed, Omar Aldhaibani, Hoshang Kolivand, Dhiya Al-Jumeily</i>	
Artificial Intelligence Technologies in Higher Education: Reality and Challenges	479
<i>Sultan T. Abu-Orabi</i>	
Integrating Computational Design and Mixed Reality Wearables for Enhanced Distance Learning in Architectural Engineering.....	485
<i>Aref Maksoud, Aseel Hussien, Sarah Isam Abdul-Rahman Alawneh</i>	
Flying Najm: Drone-Based System for Accident Reporting	491
<i>Reem Al-Muhanna, Haifa Al-Duaij, Maha Al-Hafy, Nouf Altmami</i>	
Technical Document Query System Using Transformer Model-Based Machine Reading Comprehension.....	497
<i>Amit Kumar, Friska Natalia, Sud Sudirman, Dhiya Al-Jumeily</i>	
Deep Learning Approach for Classifying Date Fruits Using YOLO: A Comparative Analysis	503
<i>Nada Theyab Alharbi, Samah Ahmed Taha, Bashayr Rakan Alsarrani, Liyakathunisa Syed</i>	
Enhancing Pedestrian Pose Detection Through YOLO Deep Learning Techniques	509
<i>Reem Sulaiman Alruwaythi, Thekra Abdulaziz Alruwaili, Ruod Mohammed Alsehli, Liyakathunisa Syed</i>	
Classification of Date Fruits into Genetic Varieties Using Image Analysis.....	515
<i>Liyakathunisa Syed, Salma Mislim Alradadi, Amani Fahad Alofi, Nada Theyab Alharbi</i>	
The Development of Individualized Assignment Generator	521
<i>Rinata R. Zaripova, Andrew V. Danilov, Leila L. Salekhova, Timur R. Fazliakhmetov</i>	

Revealing the Unseen: An Insightful Survey on Explainable AI for Deepfake Face Detection.....	526
<i>Sarah Alotaibi</i>	
Stereo Image Super Resolution Reinforced by Non-Local Means Denoising (NLMD) Algorithm	532
<i>Ali Salim Rasheed, Marwa Jabberi, Tarak M. Hamdani, Adel M. Alimi</i>	
Generative AI and Deep Learning Based Method Detecting Purchasers from Missing Data Social Media.....	538
<i>Feriel Gammoudi, Mohamed Nazih Omri</i>	
Active Vibration Control of a Smart Structure Using Neural Network	544
<i>Ahmed Abdulrahman Mohammed, Abdul-Wahid A. Saif, Fouad Al-Sunni, Sami El Ferik</i>	
Improving Fake News Detection with Adversarial Recurrent Neural Network	550
<i>Maysoon Ahmed Abbas, Dhafar Hamed Abd, Mondher Frikha, Adel M. Alimi, Mohammed Fadhil Mahdi</i>	
Role of Deep Learning Models in Intelligent Classification of Various Date Fruit Bunches	556
<i>Zainab Abuowda, Nour Salam, Shorouk Ramadan, Taimur Hassan, Mohammed Ghazal, Eqab Almajali, Abir Jafar Hussain, Jawad Yousaf</i>	
Enhancing AWS DeepRacer Performance: A Study on Reward Functions, Action Spaces, and Hyperparameter Tuning	562
<i>Mayur Madnani</i>	
Deep Learning Algorithms in Aircraft Detection and Classification: An Analytical Survey.....	568
<i>Noora Alkharji, Hesssa Almazrouei, Shaikha Alzaabi, Ali Bou Nassif, Mariame Elsalhy, Manar Abu Talib</i>	
Deep Learning-Based Stability Prediction for Electrical Grids: A Data-Driven Approach.....	574
<i>Ali Al-Ataby, Hussain Attia</i>	
Artificial Intelligence and Advanced Technologies for Managing Iraqi Water Resources	579
<i>Sulaf Assi, Wasiq Khan, Dhiya Al-Jumeily Obe</i>	
Attitudes and Perceptions Towards the Safety and Efficacy of Commonly Used Cosmetic and Lifestyle Products: Social Media Analysis	587
<i>Shoug Muqbel Alshammari, Badriah Eid Alsaif, Abdullah Al-Hamid</i>	
Machine Learning Techniques Reveal the Most Effective and Influencing Gender-Based Scan Acquisition Parameters that Contribute to Patient Dose Undergoing Enhanced CT Abdomen and Pelvis Examinations	593
<i>Entesar Zawam Dalah, Meliz Yuvali, Dilber Uzun Ozsahin</i>	
Comparing Surface-Enhanced Raman Spectroscopy and Raman Microscopy with Machine Learning for the Authentication of Covid-19 Vaccines	599
<i>Megan Watson, Dhiya Al-Jumeily Obe, Jason Birkett, Iftikhar Khan, Matthew Harper, Sulaf Assi</i>	

Author Index